Building Resilience in School Children

Risk and Promotive Factors amongst Maltese Primary School Pupils

Carmel Cefai and Liberato Camilleri

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Executive Summary

This study was a follow up to the national study on social, emotional and behaviour difficulties which sought to establish the prevalence rate and the pattern of distribution of such difficulties in Maltese primary and secondary schools (Cefai, Cooper and Camilleri, 2008). It examined the trajectories and drivers of change, both positive and negative, from Year 1 to Year 4 in primary schools.

The sample consisted of all Year 1 primary pupils who had participated in the first study and who were now in Year 4. 486 pupils attending 65 state and non-state primary schools, as well as their classroom teachers and parents were selected to participate. 79.6% of teachers, 84.2% of pupils and 61.9% of parents returned the completed questionnaires.

The first part of this report provides a portrait of pupils' behaviour in Year 4. 9.4% of Year 4 pupils have SEBD according to teachers, while the prevalence rate according to parents is 7.8%, although the difference is not significant. The most common difficulties are those related to hyperactivity, followed by conduct and emotional problems respectively. Boys appear to be more vulnerable than girls, exhibiting more difficulties and less prosocial behaviour. Both difficulties particularly conduct and peer problems, and prosocial behaviour, increased from Year 1 to Year 4.

Pupils' relationships with peers, engagement in learning, support from close friends, parental expectations, family time, father occupation, sense of classroom community, and behaviour at home are some of the strongest predictors of SEBD in Year 4. None of the whole school variables emerged as significant variables when analyzed collectively with the other variables.

Positive relationship with peers and gender emerged as the key predictors of prosocial behaviour in Year 4, but family and parents characteristics also appear to be particularly important predictors. Year 4 pupils most likely to exhibit prosocial behaviour are female pupils who have good relationships with peers, have high self-efficacy, and whose parents and teacher communicate well together; attend classrooms with high levels of pupils' engagement; are well behaved at home and come from two-parent families which provide quality time and have low levels of conflict.

The second part of this report presents the findings of the longitudinal study, examining how both SEBD and prosocial behaviour changed from Year 1 to Year 4, and how the changes were related to individual, school, home and community factors. The pupils most likely to develop SEBD from Year 1 to Year 4 appear to be those who attend schools with high levels of bullying, come from single parent families, have poor communication difficulties, poor relationship with teachers, peers, friends and parents, and have parents who are stressed and have low academic expectations for their children. The more risk factors they are exposed to, the more likelihood of difficulties in their social and emotional wellbeing and academic success. One out of every eleven children is at high risk (60% chance) for developing mental health problems, while 3% are at very high risk (75% chance of developing mental health difficulties when exposed to five or more risk factors). However, some risk factors may be more likely to lead to SEBD than others.

On the other hand, the pupils most likely to engage in prosocial behaviour over time in primary school, are those who have good relationships with their peers and the class teacher, attend schools where bullying is low, have good self-efficacy and self-esteem, are actively engaged in the learning process, and come from two parent families with good income. The more such factors are present in pupils' lives, the more likely the latter are to enjoy psychological wellbeing and mental health. The chance of having mental health problems when at least five promotive factors are

present is 0%, compared to 60% when no promotive factors are present.

When all the factors were examined to identify which of these discriminated the risk (pupils who show an increase in SEBD and a decrease in prosocial behaviour) from the promotive group (pupils who manifest an increase in prosocial behaviour and a decrease in SEBD), a similar though not identical picture emerged. The factors most likely to lead towards a healthy social-emotional trajectory in the early primary school years, include pupils' relationship with friends, teacher and peers, low bullying in school, pupils' active engagement and good academic progress, high self-esteem and self-efficacy, two-parent families with good income, adequate supervision and quality time, low parenting stress and high parental expectations. The more pupils have of these positive factors, the more likely their social and emotional development, mental health and school success will improve.

About 10% of Maltese young children are experiencing significant difficulties in their social and emotional development and are at significant risk of experiencing mental health problems. We can protect the young child from SEBD, mental health problems and school failure, if we reduce the significant risk factors and increase the promotive ones within the various systems in which the child operates, with a particular focus on building healthy, supportive and responsive families and schools. The study has identified particular windows of vulnerability which need to be closed as early in children's lives as possible, as well as windows of opportunity which might be developed to support the healthy development of young children. Our efforts need to be particularly directed towards reducing bullying at school, supporting single parents, developing children's communication skills, self-esteem and self-efficacy, building closer relationships between the child and his/her teacher and peers, strengthening the school-family collaboration, and raising parental academic expectations for their children.

Introduction

1 Introduction

Children's social and emotional health, wellbeing and difficulties are becoming an issue of increasing concern and importance in schools today. The *Health Behaviour School Checklist* study carried out amongst secondary school students in about thirty countries, reported that Maltese children and young people were with the bottom group in the list in terms of perceived health, subjective well-being and relationships with parents (WHO, 2008). They felt amongst the most pressured students in the study, with the pressure increasing across the secondary school years. Although school-based bullying was reported to be lower than the European Union (EU) average, violence was well above the average, particularly amongst 13-15 year old students, with 13 per cent of female and 26 per cent of male 13-year olds engaging in frequent fighting. Alcohol consumption amongst 13-15 year olds was at the top of the league, with 21% of female and 28% of male 13-year old students drinking weekly, rising to 39% and 51% of 15-year olds respectively. The report *Children 2010* (NSO, 2010) reported that the Maltese law courts referred 250 cases of children/young people to the Probation Services between 2002 and 2008: almost half of the reported incidences involved theft, 16 per cent violence and 13 per cent juvenile drug-related offences.

Another study amongst 23 OECD countries, based upon reports from school staff, indicated that almost half of lower secondary students in Malta intimidated or verbally abused other students, which was significantly higher than the study average (OECD, 2009). Maltese teachers said that students intimidating and verbally abusing other students (almost 50% of the teachers) or staff themselves (20% of the teachers) interfered with the quality of their instruction.

It may come as no surprise, in view of such statistics, that school teachers often prefer teaching students with other types of difficulty, such as physical or intellectual disability, than pupils with social, emotional and behaviour difficulties (SEBD) (Avramadis and Norwich, 2002; Kalambouka et al., 2007; Tanti Rigos, 2009). Indeed students with SEBD are usually the least liked and understood students (Baker 2005; Kalambouka et al., 2007; Tanti Rigos, 2009), the least likely to receive effective and timely support (Kalambouka et. al., 2007; Ofsted, 2007) and the least likely to be included (McBeath et. al., 2006). They are the only group for whom punitive, exclusionary responses are still permitted by law (Cooper 2001), a fact which makes SEBD the only individual educational needs category which exposes the student to increased risk of exclusion as a function of its identification (Jull, 2008). The high incidence of SEBD among excluded students (Parsons et al., 2001; ORegan, 2010) indicates that in the case of SEBD, schools in general tend to be more willing to consider exclusion as a legitimate resolution, than is the case for other forms of individual educational needs. Maltese students with SEBD frequently complain of feeling unloved and unwanted by their teachers and school staff, victims of an unjust and rigid system, unsupported in their needs and excluded from the academic and social aspects of school life (Cefai and Cooper, 2010).

Young people with SEBD are also the most vulnerable students to school failure and premature school leaving, social exclusion and mental health problems (Cole, Daniel and Visser, 2005; Fergusson, Horwood and Ridder 2005; Colman et al. 2009). They are more at risk of engaging in such behaviours as substance abuse, violence and criminality, and to leave school without any

certification or vocational skills, with consequent poor employability opportunities (Maes and Lievens 2003; Fergusson, Horwood and Ridder 2005; Colman et al., 2009). Seen in this way such young people may end up as an economic burden on the country's resources, including health and social services.

It is thus to be expected that social, emotional and behaviour difficulties in school continue to generate considerable debate amongst educationalists, parents and other stakeholders. The debate has been frequently characterized, however, by outdated and sterile arguments which seek to apportion blame or to pose simplistic and ill-informed explanations. Changing social and cultural values, commercial pressures and excessive consumerism, increasing children's rights, increasing poverty and inequality, family discord and breakups, parental incompetence and absence, media violence, weakening of connectedness and social support in communities, increasing stress in families and children, negative peer pressure, learning difficulties and consequent lack of support at school, academic stress, unrelated and irrelevant curriculum, are some of the common factors frequently cited as being at the cause of SEBD. Depending on one's position, understanding and beliefs, one or more of these factors are sometimes put forward to explain behaviour difficulties in school.

Informed research-based discourse in the international literature has moved away from the erstwhile simplistic mono-causal explanations for SEBD, underlining the complexity and multi-factorial nature of the phenomenon (Cooper and Jacobs, 2011; Cooper, Bilton and Kakos, in press). SEBD are best seen as a dynamic, multi-layered phenomenon that results from a wide range of influence that coalesce to create an increasingly cumulative effect. Various biological, psychological, educational and social factors influence the nature and development of SEBD, and an adequate understanding, prevention and management of such difficulties require that we examine how various individual, home and school factors interact in the development of such difficulties (Cooper, Bilton and Kakos, in press).

1.1 Rationale

This backdrop underlines the rationale of the study. We needed to know how many of our school children were facing social, emotional and behaviour difficulties, where these children were, what was causing these children to behave in this way, and what can be done to prevent and address these difficulties effectively. We needed to identify those factors which put school children more at risk for developing SEBD at school, as well as what helped to protect children from such difficulties and promoted their healthy social and emotional development. We also needed to identify these risk and protective factors in children's school lives as early as possible. Although the prevalence of SEBD is higher in secondary schools, there is a concern about the increasing incidence of such difficulties in primary schools. While presently there are more difficulties in secondary schools (Cefai, Cooper and Camilleri, 2008), such difficulties are starting earlier in primary school with a greater rate of increase in the early and junior primary years (Farrell and Humphrey, 2009; Rose et al al., 2009; Cooper and Jacobs, 2011).

This pattern is a cause for increasing concern as the onset of SEBD at an early age is a predictor of social and academic difficulties in adolescence (Fergusson, Horwood, and Ridder, 2005; Rose et al., 2009). Farrell and Polat (2003) argue that while children who are formally identified by local educational authorities as having SEBD tend to be nine years old or older, it is clear that many of these children have been identified as having such problems well before they were formally assessed, as early as the first year in primary school. This underlines the need for early identification and consequent early intervention before difficulties become more serious and entrenched in children's behaviour patterns (National Institute for Health and Clinical Excellence, 2008; Farrell and Humphrey, 2009; DataPrev Project, 2011; Domitrovich, Cortes and Greenberg, 2007).

Clearly, understanding and establishing the nature, distribution and causes of SEBD in school as early as possible in the pupils' lives, is instrumental in developing and implementing effective policies and interventions to address the needs of such pupils. The absence of epidemiological data on the distribution, nature and of SEBD in Maltese schools constitutes a barrier to developing effective early responses to such difficulties.

In view of this situation, the authors undertook a national study of social, emotional and behaviour difficulties in Maltese schools (Cefai, Cooper and Camilleri, 2008) It was a survey based on 10% of the entire school population in Malta with the aim of identifying the national patterns of distribution of children and young persons with social, emotional and behavioural difficulties in primary and secondary schools in Malta. The study sought to establish the prevalence of school children having SEBD, the pattern of their distribution within different schools, and the relationship between distribution and individual, school, family and socio-economic factors. The second part of the study was a longitudinal study seeking to identify the risk and promotive factors for SEBD in school.

1.2 Objectives

The present report presents the findings of the first longitudinal study carried out following the national study in 2008. The longitudinal study included those pupils who were in Year 1 in the initial study and who were now in Year 4. Using data from the SEBD national project together with other data collected three years later, the study examined the trajectories and drivers of change, both positive and negative, across two time periods, namely Year 1 to Year 4. More specifically the study sought to address the following questions:

- What is the prevalence of SEBD amongst Year 4 pupils and how does it compare with the prevalence rate established in the national study three years earlier?
- What individual, school and home factors predict SEBD or prosocial behaviour amongst Year 4 pupils?
- What factors predict an increase in SEBD and in prosocial behaviour from Year 1 to Year 4?
- What factors predict an increase in SEBD/decrease in prosocial behaviour (risk factors) and decrease in SEBD/increase in prosocial behaviour (promotive factors) from Year 1 to Year 4?
- What is the cumulative effect of risk and promotive factors on the mental health of primary school children?

1.3 Methodology

1.3.1 Sample

The sample in this study included all Year 1 primary pupils who had participated in the first study and who were now in Year 4. These pupils were originally chosen at random from classrooms selected through cluster sampling from a number of schools which provided a proportional representation of the school population by school region. This geographical representation is essential to ensure correct inferences. The sample consisted of 232 male and 254 female Year 4 pupils attending 65 state and non-state primary schools in Malta. The parents and classroom teachers of the selected pupils were also asked to participate in the study by providing essential information about the pupils' social, emotional and behaviour difficulties, prosocial behaviour, and various individual, school and home factors. From a total of 486 possible participants, 301 (61.9%) parents, 387 (79.6%) teachers and 409 (84.2%) pupils completed and returned their questionnaires.

1.3.2 Instruments

The Maltese version of the Strengths and Difficulties Questionnaire (SDQ) (Goodman 1997) was used as a measure of the pupils' social, emotional and behaviour difficulties and prosocial behaviour (Cefai, Cooper and Camilleri, 2008). The SDQ is a brief questionnaire which has been used by many researchers as a screening tool to measure social, emotional and behaviour difficulties, and identifies the prevalence of mental health difficulties among children and young people. It comprises four difficulty subscales, measuring emotional symptoms, hyperactivity, conduct problems and peer difficulties respectively. It also includes a fifth subscale measuring pro-social behaviour. In addition, the instrument contains an 'impact supplement' which enables the reportee to indicate the perceived level of 'burden' associated with the norm-referenced difficulties score.

The parent and teacher SDQs and SDQ impact scale were used in the study. The Maltese versions were developed through a process of forward and backward translations and then piloted with a number of teachers, parents and students. Construct validity of the Maltese version, gave correlation coefficients ranging from 0.72 to 0.89 (teachers) and from 0.71 to 0.83 (parents) on the five subscales, suggesting a satisfactory level of construct validity. The Cronbach's Alphas from a test-retest measure ranged from 0.67 to 0.92 for individual items, and from 0.75 to 0.89 for the five subscales, suggesting satisfactory reliability at both individual and subscale levels.

The present study aimed to explore the relationship between SEBD/prosocial behaviour and a number of individual, classroom, school, home and community variables, how these relationships varied from Year 1 to Year 4, and which of these variables constituted a significant risk or promotive factor. Moreover, a set of supplementary questionnaires completed by teachers, parents and pupils were constructed to collect essential information about various factors that were found to be related to the development of

SEBD and the promotion of positive behaviour. A review of the literature identified various factors related to SEBD and prosocial behaviour amongst school children, including individual factors such as age, gender, language, locality, ethnicity, personality factors such as self-esteem and self-efficacy, and the presence of other difficulties such as medical conditions. Classroom and school factors such as attainment, attendance, engagement, learning difficulties, and support with learning, relationship with teachers, peer relationships have also been found to be significant predictors, as were and home and community variables such as socio-economic status, family structure and size, family relationships, parenting and neighbourhood safety and support amongst others.

In the first study, a relatively large scale survey, we had to restrict the focus to structural variables such as age, gender, region, school size, and SES, with less attention to such processes as classroom relationships, classroom management strategies, whole school approach to behaviour, family relationships and parenting style amongst others. In the follow-up study we excluded some of the variables which were not found to be significant in the local context such as religion and ethnicity, but included other relational and psychosocial factors which were identified in the literature as being strongly related to pupil behaviour. These included amongst others pupils' relationships with teachers, peers and family members, classroom management, staff teamwork and collegiality, meaningful and influential engagement of both pupils and staff, sources of support at school and at home, parenting strategies, family relationships and dynamics, and community support.

The inclusion of variables in our study depended on various factors, namely a review of the international literature on the factors which were found to predict either SEBD or prosocial behaviour, the factors which emerged as significant factors in the first study, as well as the constraints imposed on the study such as issues of accessibility and confidentiality. Since the study was not anonymous, it was decided to avoid items which might have proved to be sensitive for the participants and thus jeopardise the response

rate. Indeed, this was a particularly relevant issue as we had only a relatively small sample of parents, teachers and pupils. In this respect we avoided questions related to family abuse, family psychopathology and marital conflict amongst others, while not delving too deep into relationships with parents and teachers.

Our model of child behaviour is one that construes behaviour as being influenced by multiple contexts in line with Bronfenbrenner's systems theory (Bronfenbrenner, 1989). The classroom, the whole school, the family, the local community, as well as the child's own personality all impact his or her behaviour. We therefore categorised the predictive variables into individual, class, school home and community factors. The individual student variables were grouped into 3 subgroups, namely individual characteristics such as gender, locality, language, illness/disability, medication/therapy, communication, self-esteem and self-efficacy (Gilligan, 2001; Linnenbrink and Pintrich 2003; Newman, 2004; Ford et al., 2007; Hysing et al., 2007; Guttman and Brown, 2008; Cooper and Jacobs, 2011); classroom and school variables, including support in learning, academic progress and expectations, engagement, learning difficulties, attendance, relationship with teachers, peers, and friends and home-school communication (Resnick et al., 1997; Hamre and Pianta, 2001; Desforges and Abouchaar, 2003; Fletcher-Cambell and Wilkin, 2003; Ford et al., 2007; Gutman and Feinstein, 2008; Cooper and Jacobs, 2011); and home variables, including socio-economic status, family structure and size, relationships with parents, siblings, relatives and friends, and family dynamics such as quality of parenting, family time and family cohesion (Darling, 1999; Amato, 2001, 2005; Davies-Kean, 2005; Bradley and Corwyn, 2007; Engle and Black, 2008; Gutman and Feinstein, 2008; McLanahan, 2009); and community safety and support (Hawkins, Catalano and Arthur, 2002; Siqueira and Diaz, 2004; Arthur et al, 2007). The whole classroom variables included classroom characteristics, such as pupils' behaviour during play, engagement, collaboration, involvement in decisions and sense of community, as well as teacher's classroom management and training (Resnick et al., 1997; Solomon et al., 2000; Gutman, Sameroff, and

Eccles, 2002; Battistich, Schaps, and Wilson, 2004; Adi et al., 2007a; Rose et al., 2009; Cooper and Jacobs, 2011). The whole school variables included the pupils' behaviour, support, collaboration, and engagement at school as well as bullying, and staff's participation, teamwork and collegiality and administrative support (Fletcher-Cambell and Wilkin, 2003; Battistich, Schaps, and Wilson, 2004; McLaughlin, 2006; Adi et al., 2007a; Rose et al., 2009; Cooper and Jacobs, 2011). Table 1.1 presents the list of individual variables examined in this study categorised in the three subgroups described above; while Table 1.2 presents the list of whole classroom and school variables.

Table 1.1: Individual child variables

Individual characteristics	Gender Mother language Locality Illness or disability Medication or therapy Communication Self-esteem (teacher and parent reported) Self-efficacy (teacher and parent reported)
Classroom and school variables	Academic progress (teacher and pupil reported) Teacher academic expectation Parent academic expectation Learning difficulties Learning support(teacher and pupil reported) Peer support with work Support with homework Source of support at school Repeating a year Engagement (teacher and pupil reported) What helps in learning Attendance Teacher-parent communication

	Parent-school communication Teacher-pupils relationship Pupils-teacher relationship Relationships with peers (teacher and pupil reported) Friends at school Close friends at school Support from close friends Plays with peers Ways of improving behaviour at school
Home and community variables	Family structure Family size Father and mother occupation Father and mother education Family income Family time Behaviour at home Communication with parents Relationship with siblings Relationship with relatives Parent reported friends Source of support at home Membership in organisations Participation in organisations Family cohesion Family conflict Parenting stress Parenting difficulty Parenting quality time Parenting supervision Parenting strategies Neighbourhood safety Neighbourhood support

Table 1.2: Whole classroom and whole school variables

Whole classroom variables	Pupils' participation in lessons Pupils' involvement in decisions Pupils' collaboration in learning Pupils' behaviour during play Pupils' sense of classroom community Classroom resources Classroom management Teacher training
Whole school variables	Pupils' behaviour at school Pupils' support and collaboration Pupils' engagement in school activities Pupils' participation in decisions Bullying Staff participation in school activities Staff participation in decisions Staff teamwork Staff support and collegiality Administrative support

Information about individual variables was extracted mainly from teachers' and pupils' questionnaires, that about home and community variables from the parents' questionnaires, while the teachers' questionnaire provided information on the class and school variables. Most of the variables were assessed on a 3-point ordinal scale assuming a continuum between the categories (frequently, occasionally, rare; very good, average, poor; always, sometimes, never). The teacher questionnaire was divided into three sections, namely a section on the individual pupil being assessed (individual characteristics related to learning, relationships and behaviour), a section on their classroom such as classroom management, pupils' collaboration and relationships, and teacher training, and a section on the whole school such as pupils' behaviour, support and bullying, staff teamwork and collegiality, and school-home relationship. The parent supplementary questionnaire also included three sections,

namely one section on demographic variables (family size and structure, parental occupation and education, home language and region), another on the child being assessed (individual characteristics related to relationships with family members and parenting), and another section on the family and community, such as family cohesion and dynamics and community safety and support. The pupil questionnaire asked questions about the pupil's learning and behaviour at school, relationships with teacher, peers and friends, sources of support at school and at home, relationships with parents, siblings and friends, and participation in local organisations.

The teacher, parent and pupil supplementary questionnaires were all self-administered by the participants, but in the case of some pupils the questionnaire was read to them by a research assistant and the pupils ticked the appropriate boxes for each statement. The teachers and parents completed both the SDQ and the supplementary questionnaires.

1.3.3 Analysis

Hypothesis testing was carried out mainly via the One-way ANOVA and Chi-Square tests. The One-way ANOVA test was used to compare mean scores, elicited from teachers' and parents' SDQ evaluations, with the categories of each individual, classroom, school, home and community variable. The chi square test was used to examine the association between improvement/deterioration in SEBD/prosocial behaviour and the levels of each categorical predictor. For both tests, a 0.05 level of significance was employed.

Modelling was carried out mainly through ANOVA regression and Logistic regression analysis. ANOVA regression analysis was used to relate collectively the SDQ scores provided by respondents to individual, classroom, school, home and community predictors. Moreover, the models were used to identify the significant predictors of SEBD and Prosocial behaviour and rank them by their contribution in explaining variations in the responses.

To identify the significant risk and promotive factors, pupils were clustered into two groups, namely whether they experienced an improvement or deterioration in SEBD/prosocial behaviour from Year 1 to Year 4. Logistic regression analysis was used to relate collectively these categorical responses to individual (individual characteristic, classroom, school and home/community) predictors and whole class and whole school predictors, and simultaneously identify and rank the strongest risk and promotive predictors. Only students whose SEBD/prosocial behaviour scores were available in both Year 1 and Year 4 were included in this analysis. Moreover, pupils exhibiting no change over the three year period were also excluded. The teachers' SDQ scores suggested that the total difficulty score of 330 pupils changed between Years 1 and 4, while 275 had a change in prosocial score. The corresponding numbers of pupils who showed a change on the basis of parents' SDQ were 175 and 125 respectively.

1.4 Report Structure

This report is divided in two main parts with three chapters each, and an overall conclusion. Part 1 (Chapters 2-4) presents the data related to Year 4 pupils. Chapter 2 presents the prevalence rate of SEBD and prosocial behaviour amongst Year 4 students in Maltese primary schools, and discusses how these compare with the previous rate established in the initial national study. In Chapters 3 and 4 we investigate through ANOVA regression analysis the relationships between SEBD/prosocial behaviour of Year 4 pupils and a number of individual, classroom, school, community and home variables. In both chapters, we identify the predictors that best explain the variation in the responses. Part 2 (Chapters 5-7) presents the data of the longitudinal study. In Chapters 5 and 6 we examine through Logistic regression analysis the change in SEBD and prosocial behaviour from Year 1 to Year 4, identifying the strongest predictors associated with these changes. In both chapters we also examine the cumulative effect of risk and promotive factors on

children's mental health. Chapter 7 seeks to build a profile of risk and promotive factors amongst primary school children by identifying the factors which either lead to an increase in SEBD and decrease in prosocial behaviour on one hand (risk factors), or to a decrease in SEBD and increase in prosocial behaviour on the other (promotive factors). The Conclusion (Chapter 8) summarises the findings of the whole study and discusses the implications of the findings for practice in Maltese primary schools.

Part 1

SEBD and Prosocial Behaviour in Year 4

2 Prevalence rate of SEBD in Year 4

In the national study on SEBD in Maltese schools, it was found that 9% of primary school pupils have SEBD (Cefai, Cooper and Camilleri, 2008). The prevalence rate was established on the basis of data collected from teachers across all the primary school years. In the current study, we sought to establish the prevalence rate of SEBD in Year 4 on the basis of both the teachers' and parents' versions of the SDQ. The following sections describe the prevalence rate in Year 4 by gender, followed by a description of the mean SDQ subscale scores by type of difficulty and gender. An examination of the changes in the subscale scores from Year 1 to Year 4 is also carried out by gender, making use of both the teachers' and parents' evaluations.

2.1 Prevalence rate of SEBD in Year 4

To determine the prevalence rate of SEBD amongst Year 4 primary pupils, the SDQ Impact Supplement was completed by both teachers and parents. The Impact Supplement includes five items that assess overall distress and social impairment measured on a 3-point scale. Pupils are classified as falling into the normal, borderline or abnormal band according to the scores generated and

the cut off points established in the previous study (Cefai, Cooper and Camilleri, 2008). The prevalence rate of pupils with SEBD is based on the proportion of pupils falling within the abnormal category.

For the 486 Year 4 pupils that were randomly selected for this study, the teachers completed the Impact Supplement for 374 pupils (76.95%), whereas the parents returned 268 completed questionnaires (55.14%). 226 pupils were assessed by both teachers and parents, 148 by teachers only, 42 by parents only. Seventy pupils were neither assessed by teachers nor by parents. According to teachers, 81.0% of the Year 4 pupils were in the normal band, 9.6% in the borderline and the remaining 9.4% in the abnormal (Table 2.1 and Figure 2.1). The 9.4% cut off point for abnormal SEBD cases in Year 4 is comparable to the 9.05% cut off point established by Cefai, Cooper and Camilleri (2008) of pupils with SEBD in primary schools. The 95% confidence interval suggests that the actual (population) prevalence rate lies between 6.44% and 12.36% (Table 2.1). The confidence interval includes the 2008 SEBD prevalence rate (9.05%) established for primary schools, which implies that the present situation is comparable to the 2008 rate. Parents perceive a lower percentage (7.8%) of Year 4 pupils in the abnormal category and a higher percentage (83.6%) of pupils in the normal category; however, the differences between proportions are not significant at the 0.05 level of significance.

Table 2.1: Prevalence rate of SEBD in Year 4

SEBD		Percentage	95% confidence interval	
Teacher assessment	Normal	81.0%	77.02%	84.98%
	Borderline	9.6%	6.62%	12.58%
	Abnormal	9.4%	6.44%	12.36%
Parent assessment	Normal	83.6%	79.17%	88.03%
	Borderline	8.6%	5.24%	11.96%
	Abnormal	7.8%	4.59%	11.01%

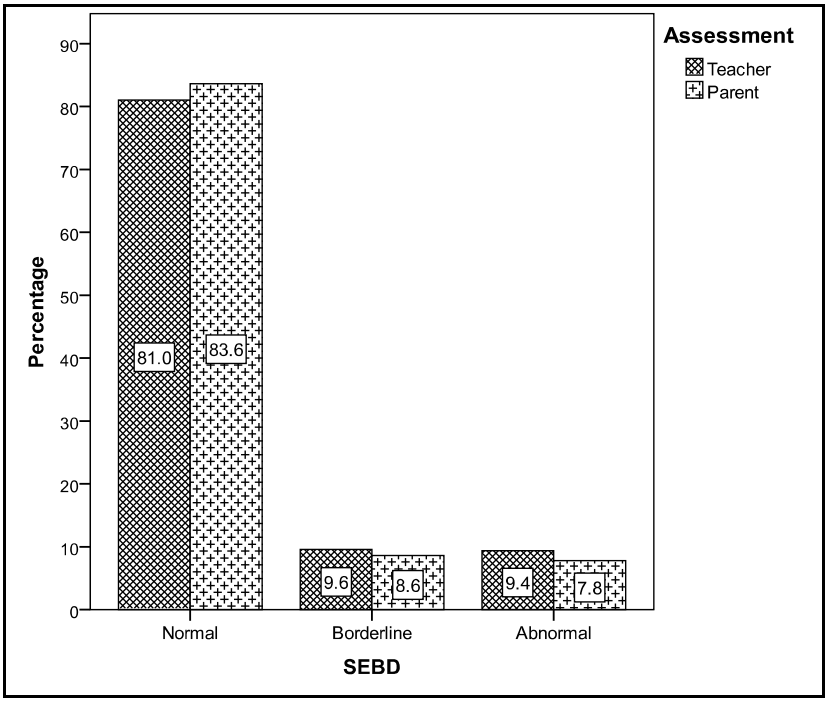

Figure 2.1: Prevalence rate of SEBD in Year 4

Both teachers' and parents' assessments indicate that there are higher proportions of females in the normal SEBD category and higher proportions of males in the borderline and abnormal categories; again these differences are not significant at the 0.05 level of significance (Table 2.2 and Figure 2.2).

Table 2.2: Prevalence rate of SEBD in Year 4 by gender

SEBD	Teacher Evaluation		Parent Evaluation	
	Boys	Girls	Boys	Girls
Normal	80.2	81.8	82.8	84.4
Borderline	10.0	9.2	8.8	8.4
Abnormal	9.8	9.0	8.4	7.2

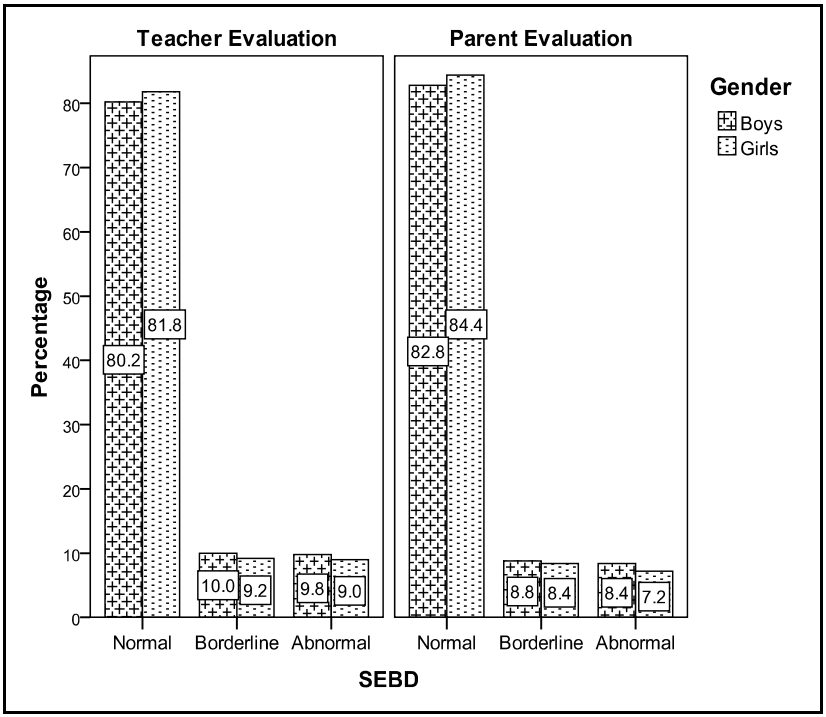

Figure 2.2: Prevalence rate of SEBD by gender

Finally, of the 226 students who were assessed by both teachers and parents, 87.6% of the parents' evaluations matched the teachers' evaluations, suggesting that parents and teachers tend to agree on the SEBD categorization of primary school pupils (Table 2.3).

Table 2.3: SEBD categorisation of Year 4 pupils

		Parent evaluation			Total
		Normal	Borderline	Abnormal	
Teacher evaluation	Normal	183	11	2	196
	Borderline	10	8	3	21
	Abnormal	1	1	7	9
Total		194	20	12	226

2.2 Changes in pupils' behaviour from Year 1 to Year 4

Tables 2.4 and 2.5 show the mean subscale scores of Year 4 pupils categorised by gender for teachers' and parents' evaluations. The sample of 347 Year 4 pupils assessed by teachers consisted of 159 males and 188 females; whereas the 193 pupils assessed by parents consisted of 91 males and 102 females. In general, the parents' means are higher than those of teachers for both difficulties and prosocial behaviour, a finding similar to the pattern found in the national study. Another similar finding to that of the previous study is that in both the teachers' and parents' assessments, hyperactivity featured as the most common problem amongst Year 4 pupils.

Table 2.4: Teachers' evaluations of pupils in Year 4

Subscale		Mean	Std. Dev.	95% Confidence Interval for Mean		P-value
				Lower Bound	Upper Bound	
Emotion	Male	1.78	2.171	1.46	2.10	0.924
	Female	1.82	2.183	1.52	2.12	
Conduct	Male	2.06	2.250	1.43	2.09	0.792
	Female	2.11	1.391	2.21	2.60	
Hyperactivity	Male	3.91	3.236	3.43	4.38	0.000
	Female	2.53	2.567	2.18	2.89	
Peer	Male	1.88	1.960	1.59	2.17	0.971
	Female	1.87	1.878	1.61	2.13	
Prosocial	Male	7.50	2.356	7.16	7.85	0.000
	Female	8.32	2.151	8.02	8.62	
Total Difficulty	Male	9.36	7.168	8.31	10.42	0.253
	Female	8.61	5.627	7.83	9.39	

On the other hand, while parents suggest that emotional problems are the most pressing problem following hyperactivity, teachers' evaluations indicate conduct. Both teachers and parents agree that males are more hyperactive, less prosocial and have more difficulties than females; however, they have contrasting views regarding other types of difficulties. Teachers perceive that females

have more emotional and conduct problems than males; whereas, parents' assessments indicate that males have more emotional, peer and conduct difficulties than females. However, most mean scores do not differ significantly between genders.

Table 2.5: Parents' evaluations of pupils in Year 4

Subscale		Mean	Std. Dev.	95% Confidence Interval for Mean		P-value
				Lower Bound	Upper Bound	
Emotion	Male	2.76	2.327	2.36	3.15	0.294
	Female	2.47	2.306	2.10	2.84	
Conduct	Male	2.26	1.643	1.99	2.54	0.004
	Female	1.73	1.514	1.48	1.97	
Hyperactivity	Male	4.59	2.549	4.16	5.02	0.000
	Female	3.12	2.442	2.73	3.51	
Peer	Male	2.43	2.096	2.07	2.78	0.064
	Female	2.01	1.734	1.73	2.28	
Prosocial	Male	8.53	1.682	8.24	8.81	0.001
	Female	9.17	1.508	8.93	9.41	
Total Difficulty	Male	12.04	6.448	10.94	13.13	0.000
	Female	9.33	5.747	8.41	10.24	

Tables 2.6 and 2.7 present the teachers' and parents' evaluations of total difficulty and the five subscales' scores for those pupils whose SDQ scores were available both in Year 1 and Year 4. There is an increase in the mean total difficulty and prosocial scores from Year 1 to Year 4 in both teachers' and parents' evaluations. The increase in difficulties is significant in teachers' evaluation; whereas the improvement in prosocial behaviour is significant in the parents' assessment. The increase in the total difficulty score, however, is not reflected evenly across the four difficulty subscales. Teachers' evaluations suggest an increase in all behaviour problems except emotional difficulties, while parents' evaluations indicate an increase in emotional, conduct and peer difficulties but a significant decrease in hyperactivity. Both teachers and parents agree that conduct and peer difficulties tend to increase from Year 1 to Year 4,

but they have contrasting views about emotional and hyperactivity problems.

Table 2.6: Teachers' evaluations of pupils in Year 1 and Year 4

Subscale		Mean	Std. Dev.	95% Confidence Interval for Mean		P-value
				Lower Bound	Upper Bound	
Emotion	Year 1	2.02	2.217	1.78	2.25	0.142
	Year 4	1.80	2.153	1.57	2.03	
Conduct	Year 1	1.19	1.780	1.01	1.38	0.000
	Year 4	2.12	1.871	1.93	2.32	
Hyperactivity	Year 1	3.16	2.816	2.86	3.45	0.638
	Year 4	3.22	2.930	2.92	3.53	
Peer	Year 1	1.53	1.685	7.49	7.98	0.003
	Year 4	1.90	1.963	7.67	8.15	
Prosocial	Year 1	7.74	2.304	7.28	8.51	0.262
	Year 4	7.91	2.287	8.37	9.72	
Total Difficulty	Year 1	7.89	5.810	1.78	2.25	0.001
	Year 4	9.05	6.359	1.57	2.03	

Table 2.7: Parents' evaluations of pupils in Year 1 and Year 4

Subscale		Mean	Std. Dev.	95% Confidence Interval for Mean		P-value
				Lower Bound	Upper Bound	
Emotion	Year 1	2.21	2.072	1.92	2.51	0.021
	Year 4	2.58	2.270	2.26	2.90	
Conduct	Year 1	1.75	1.393	1.55	1.94	0.137
	Year 4	1.93	1.575	1.71	2.16	
Hyperactivity	Year 1	4.27	2.383	3.93	4.61	0.009
	Year 4	3.79	2.645	3.42	4.17	
Peer	Year 1	1.76	1.706	1.52	2.00	0.007
	Year 4	2.17	1.875	1.90	2.43	
Prosocial	Year 1	8.61	1.620	8.38	8.84	0.021
	Year 4	8.92	1.695	8.68	9.16	
Total Difficulty	Year 1	9.99	4.986	9.28	10.70	0.239
	Year 4	10.47	6.183	9.59	11.35	

Tables 2.8 and 2.9 display the mean SDQ scores of total difficulty and the five subscales categorised by gender. The tables reveal an interesting portrait of similarities and contrasts. While teachers' and parents' evaluations suggest an increase in total difficulty for males, their evaluations diverge with relation to female pupils: teachers' evaluations indicate a significant increase in total difficulties, while parents' suggest a decrease in difficulty (though not significant). In contrast, prosocial behaviour appears to increase in both genders though most differences between mean scores are not significant.

Table 2.8: Mean subscale scores by gender (teachers' assessment)

Subscale	Gender	Year	Mean	Std. Deviation	P-value
Emotion	Male	Year 1	2.05	2.383	0.389
		Year 4	1.83	2.162	
	Female	Year 1	1.99	2.071	0.317
		Year 4	1.77	2.151	
Conduct	Male	Year 1	1.52	2.031	0.196
		Year 4	1.83	2.287	
	Female	Year 1	0.92	1.488	0.000
		Year 4	2.37	1.387	
Hyperactivity	Male	Year 1	3.86	2.955	0.621
		Year 4	4.03	3.166	
	Female	Year 1	2.56	2.554	0.952
		Year 4	2.55	2.532	
Peer	Male	Year 1	1.49	1.831	0.059
		Year 4	1.90	2.016	
	Female	Year 1	1.56	1.555	0.060
		Year 4	1.90	1.922	
Prosocial	Male	Year 1	7.30	2.451	0.611
		Year 4	7.44	2.399	
	Female	Year 1	8.11	2.109	0.341
		Year 4	8.31	2.112	
Total Difficulty	Male	Year 1	8.91	6.256	0.374
		Year 4	9.58	7.204	
	Female	Year 1	7.03	5.270	0.005
		Year 4	8.59	5.525	

Teachers suggest a slight decrease in emotional difficulties for both genders and an increase in conduct and peer difficulties. Parents' evaluations suggest a possible increase in hyperactivity and total difficulty for males and a decrease for females. Their evaluations also suggest increases in emotional difficulties, conduct and peer problems for both genders. Figures 2.3-2.8 provide a more visual illustration of these gender differences in prosocial behaviour and social, emotional and behaviour difficulties.

Table 2.9: Mean subscale scores by gender (parents' assessment)

Subscale	Gender	Year	Mean	Std. Deviation	P-value
Emotion	Male	Year 1	2.22	2.091	0.060
		Year 4	2.84	2.296	
	Female	Year 1	2.21	2.065	0.626
		Year 4	2.35	2.232	
Conduct	Male	Year 1	1.75	1.419	0.080
		Year 4	2.14	1.603	
	Female	Year 1	1.75	1.377	1.000
		Year 4	1.75	1.533	
Hyperactivity	Male	Year 1	4.22	2.649	0.443
		Year 4	4.52	2.558	
	Female	Year 1	4.31	2.129	0.001
		Year 4	3.15	2.566	
Peer	Male	Year 1	1.65	1.622	0.014
		Year 4	2.33	2.066	
	Female	Year 1	1.86	1.780	0.519
		Year 4	2.02	1.683	
Prosocial	Male	Year 1	8.36	1.895	0.596
		Year 4	8.51	1.734	
	Female	Year 1	8.82	1.301	0.021
		Year 4	9.29	1.577	
Total Difficulty	Male	Year 1	9.84	5.069	0.021
		Year 4	11.82	6.375	
	Female	Year 1	10.13	4.933	0.253
		Year 4	9.26	5.775	

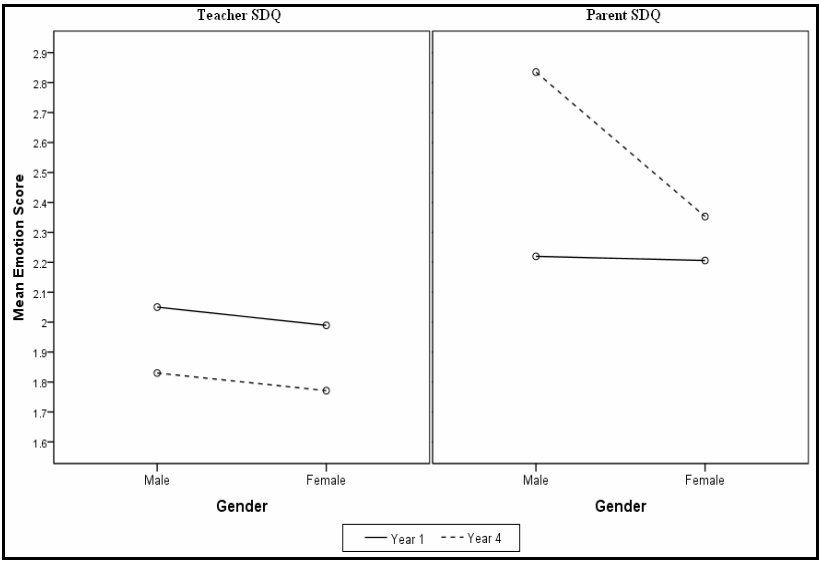

Figure 2.3: Gender differences in emotional difficulties

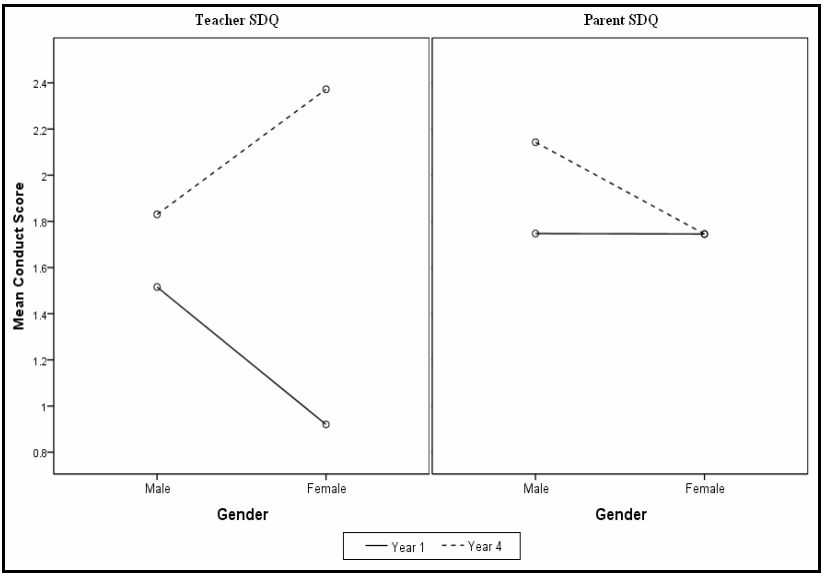

Figure 2.4: Gender differences in conduct problems

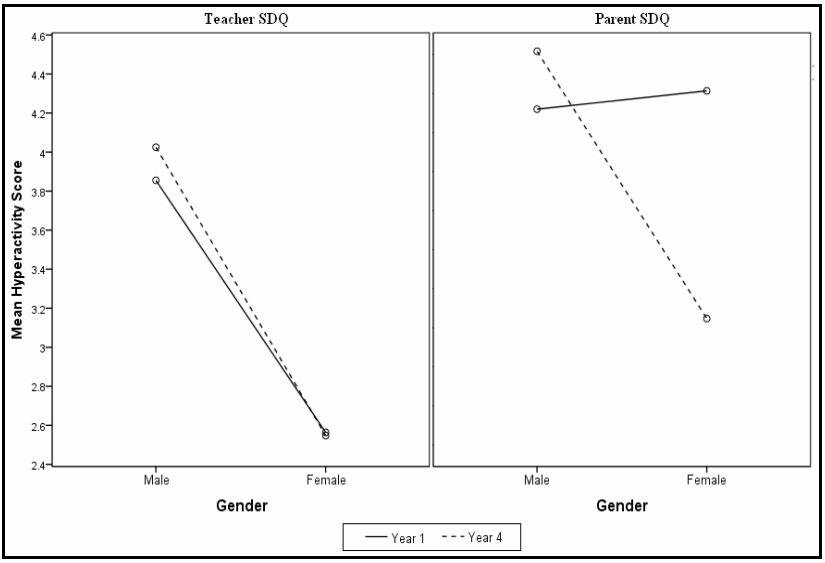

Figure 2.5: Gender differences in hyperactivity problems

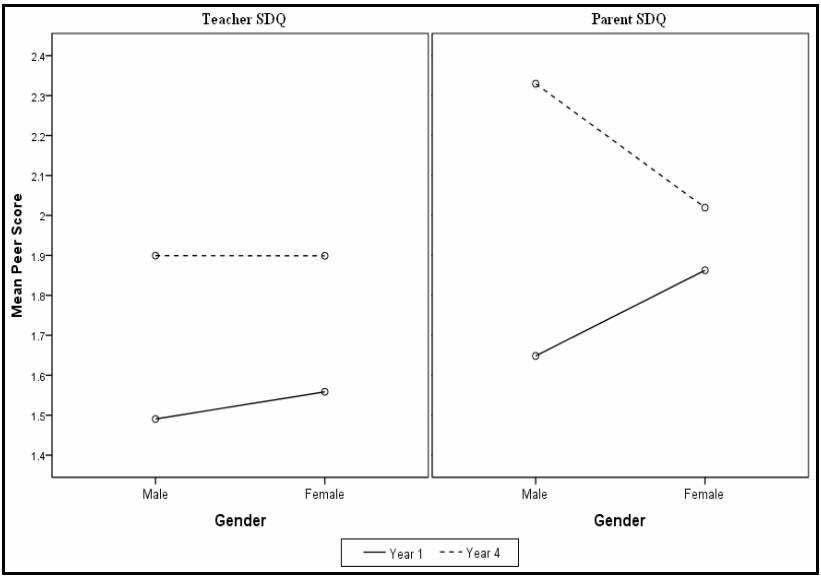

Figure 2.6: Gender differences in peer difficulties

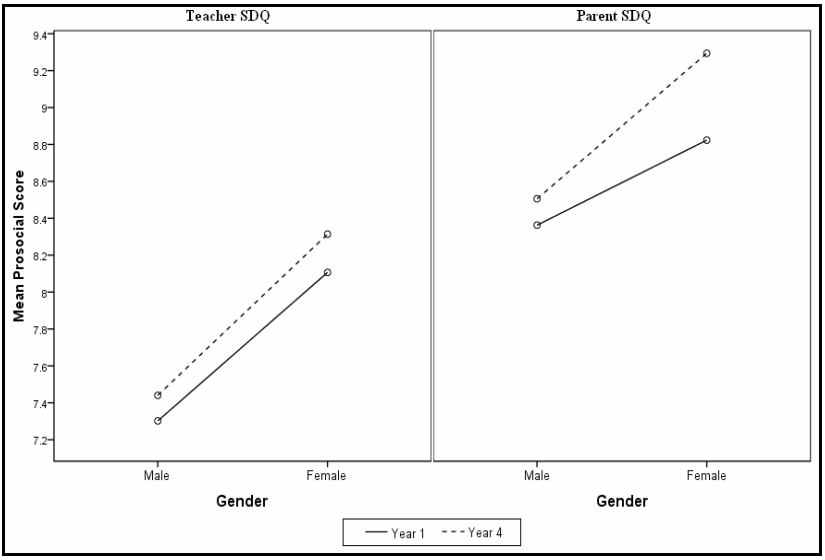

Figure 2.7: Gender differences in prosocial behaviour

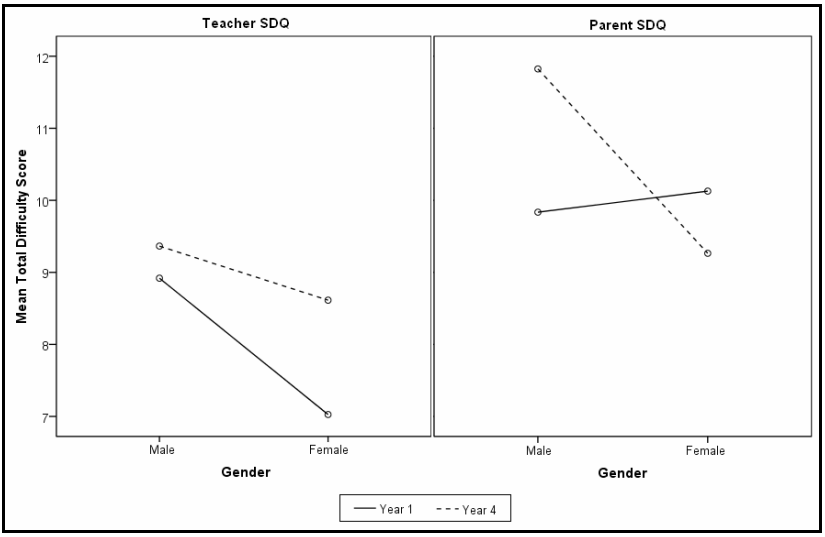

Figure 2.8: Gender differences in total difficulties

3 SEBD by individual, school and home factors in Year 4

This chapter explores the relationship between social, emotional and behaviour difficulties and a range of individual, school and home variables. The first section presents the teachers' and parents' SDQ mean total difficulty scores according to the various individual variables, clustered into three subgroups, namely individual characteristics, classroom/school and home variables. It also presents the results of the ANOVA regression analysis which identified the significant individual predictors. The chapter then examines the mean total difficulty scores by whole classroom and whole school variables and concludes with a final regression analysis of all the significant SEBD predictors taken together.

3.1 SEBD by individual variables

The individual level variables have been grouped into three sets of factors, namely individual characteristics, such as gender and self-esteem, classroom and school factors such as academic progress, engagement and relationships with teacher and peers, and home and community characteristics such as communication with parents and behaviour at home. These will be discussed separately in the following sections.

3.1.1 Individual characteristics variables

Table 3.1 Mean total difficulty scores by individual characteristics

Individual variables (Characteristics)		Total Difficulty Score (Year 4)			
		Teacher		Parent	
		Mean	St. Dev	Mean	St. Dev
Gender	Male	9.58	7.204	**11.82**	6.375
	Female	8.59	5.525	**9.26**	5.775
Language	Maltese	9.03	6.473	10.44	6.192
	English/other	8.32	4.845	7.42	3.919
Locality	North harbour	7.48	6.425	11.29	6.048
	South harbour	9.32	6.106	9.48	6.219
	South Eastern	8.42	6.068	10.27	5.759
	Western	7.00	5.685	10.67	6.426
	Northern	8.20	5.979	10.38	6.105
	Gozo	8.50	5.550	9.12	7.415
Illness or disability	Yes	**11.23**	6.747	**13.87**	6.283
	No	**7.67**	5.562	**10.02**	6.023
Medication or therapy	Yes	9.89	4.954	**13.95**	5.979
	No	7.84	5.809	**10.05**	6.070
Communication	Poor	**18.75**	8.552	**14.67**	9.048
	Adequate	**12.18**	6.019	**13.09**	6.661
	Very good	**7.41**	5.330	**9.20**	5.449
Teacher reported self-esteem	Low	**17.45**	6.677	**13.80**	7.014
	Average	**11.17**	5.975	**12.91**	6.946
	High	**6.98**	5.422	**8.73**	5.065
Parent reported self-esteem	Low	**12.29**	10.11	**18.00**	5.621
	Average	**9.30**	6.156	**12.96**	6.197
	High	**7.16**	5.209	**9.00**	5.548
Teacher reported self-efficacy	Low	**16.46**	6.592	**12.00**	6.986
	Average	**10.38**	6.248	**12.06**	6.657
	High	**6.83**	5.212	**8.70**	5.182
Parent reported self-efficacy	Low	8.88	5.111	**18.00**	6.205
	Average	8.63	6.359	**12.39**	5.954
	High	7.30	5.238	**8.44**	5.205

Table 3.1 provides descriptive statistics for total difficulty scores categorised by individual characteristics variables using both teachers' and parents' evaluations. Mean total difficulty scores that differ significantly are marked bold.

Individual personality characteristics such as communication skills, self-esteem and self-efficacy appear to be some of the predictors most strongly related to SEBD according to both teacher and parent responses. Health conditions and disability are similarly significantly related to SEBD, while pupils undergoing intervention for their difficulties are more likely to have SEBD, however, the relationship is weaker. Male pupils appear to have more difficulties than females but language and locality do not seem to be related to SEBD.

3.1.2 Individual classroom and school variables

Table 3.2 presents descriptive statistics for total difficulty scores by individual classroom and school variables, using both teachers' and parents' evaluations. Significant differences between mean scores are marked bold.

Most of the classroom related individual characteristics are significantly related to SEBD according to both teachers' and parents' responses. The teacher-pupils relationship features as a strong predictor of SEBD according to both teachers and parents: SEBD tends to increase significantly when this relationship deteriorates. Parents' evaluations suggest that peer relationships are not as important as the relationship with the teacher, but teachers' evaluations indicate that pupils who have poor relationships with peers and who have no friends at school are more likely to experience SEBD. Both teachers' and parents' evaluations indicate that support from close friends and playing with peers are protective against SEBD. According to both teachers' and parents' evaluations, learning difficulties, academic progress, teacher, peer and parental support with learning, engagement, and teachers' and parents' academic expectations are all strongly related to SEBD. Attendance and home-school communication are also significant predictors of SEBD.

Table 3.2: Mean total difficulty scores by individual classroom and school variables

Individual variables (Learning)		Total Difficulty Score (Year 4)			
		Teacher		Parent	
		Mean	St. Dev	Mean	St. Dev
Teacher reported academic progress	Poor	**15.35**	7.095	**14.29**	6.799
	Average	**10.90**	5.497	**12.55**	6.645
	Very good	**6.23**	4.642	**8.62**	5.167
Pupil reported academic progress	Poor	**14.50**	7.186	**13.86**	4.598
	Average	**9.02**	5.996	**11.48**	7.096
	Very good	**7.88**	5.894	**8.95**	4.832
Teacher academic expectation	Poor	**16.11**	6.283	**14.90**	5.724
	Moderate	**11.31**	6.266	**13.24**	7.052
	Good	**6.52**	4.810	**8.54**	4.984
Parental academic expectation	Poor	**11.40**	6.022	**19.33**	7.501
	Moderate	**11.11**	6.477	**15.63**	5.678
	Good	**6.78**	5.044	**8.09**	4.602
Learning difficulties	Many	**15.41**	7.859	**17.25**	6.397
	Some	**9.03**	5.764	**11.04**	6.190
	None	**7.65**	6.023	**8.99**	5.745
Teacher reported learning support	Yes	**13.77**	6.564	**14.06**	7.166
	No	**8.28**	6.030	**9.75**	5.812
Pupil reported support	Not much	9.68	7.041	11.18	5.982
	Moderate	8.96	6.033	10.28	6.367
	A lot	8.42	6.155	10.25	6.121
Peer support with work	Not much	**10.74**	6.802	**13.70**	6.689
	Moderate	**9.37**	6.084	**10.13**	6.236
	A lot	**7.86**	5.933	**9.76**	5.778
Support with homework	Not much	**6.25**	4.606	**7.98**	5.206
	Moderate	**7.93**	5.756	**10.32**	5.742
	A lot	**10.28**	6.348	**13.27**	6.536
Repeating a year	Yes	**12.80**	7.815	**17.00**	6.245
	No	**8.83**	6.292	**10.08**	6.045
Teacher reported engagement	Low	**15.29**	6.789	**12.50**	7.607
	Average	**9.86**	5.844	**11.83**	6.212
	High	**6.11**	4.723	**8.48**	5.200
Pupil reported engagement	Low	**13.04**	7.651	**12.33**	7.566
	Average	**8.66**	5.615	**11.80**	6.432
	High	**8.21**	6.287	**9.15**	5.600
Attendance	Regular	**8.81**	6.302	10.15	6.061
	Irregular	**12.79**	6.886	12.75	8.057

Teachers-parent communication	Poor	**18.73**	6.018	13.00	4.000
	Moderate	**13.36**	7.606	12.62	6.265
	Good	**7.93**	5.541	9.98	6.101
Parent-school communication	Moderate	8.95	5.721	**12.48**	6.334
	Good	7.67	5.761	**9.59**	5.925
Teacher-pupil relationship	Moderate	**16.19**	7.773	12.88	6.752
	Very good	**7.82**	5.267	9.93	5.979
Pupil-teacher relationship	Poor	**13.24**	7.273	**13.98**	4.274
	Moderate	**9.87**	6.427	**12.16**	6.814
	Very good	**7.82**	5.742	**9.54**	5.833
Teacher reported relationship with peers	Poor	**21.85**	4.828	16.75	6.850
	Moderate	**14.33**	6.853	11.22	7.100
	Very good	**7.21**	4.785	9.84	5.792
Pupil reported relationship with peers	Poor	**12.35**	7.469	14.00	5.538
	Moderate	**9.61**	6.467	10.78	6.868
	Very good	**8.07**	5.797	9.93	5.783
Pupil has friends at school	Yes	**8.56**	5.887	10.19	6.071
	No	**17.29**	10.07	10.75	8.770
Pupil has close friends	Yes	8.76	6.215	10.26	6.115
	No	10.21	6.658	13.17	7.333
Pupil has support from close friends	Not at all	**11.17**	4.355	**20.17**	4.215
	Moderate	**8.82**	6.401	**11.12**	6.135
	A lot	**6.48**	3.917	**8.36**	4.947
Pupil plays with peers	Not much	**17.43**	9.863	**20.50**	3.536
	Moderate	**10.46**	5.948	**12.48**	7.481
	A lot	**8.34**	5.972	**9.85**	5.821

Figure 1 displays sources of pupils' support at school. More than 80% of Year 4 pupils mentioned teacher support helps them in their learning at school. This is followed by support from friends and peers (43.1% and 41.9% respectively), non-academic staff (24%) and the Head of school (15.2%). Figure 3.2 displays sources of pupils' support in learning. Teacher support (54.4%), meaningful lessons (53.2%) and active participation in lessons (46.1%) as well as support from parents (50%) are the strongest sources, followed by learning through play (29.7%) and peer support (25%). Clearly a caring teacher relationship, an engaging and connective pedagogy, and parental support are the critical determinants of what help pupils to learn according to the pupils themselves.

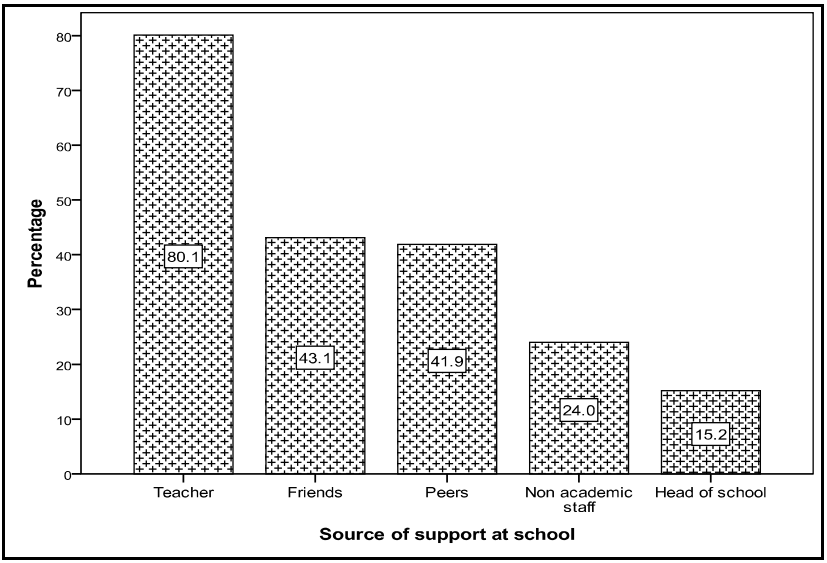

Figure 3.1: Sources of pupil support at school

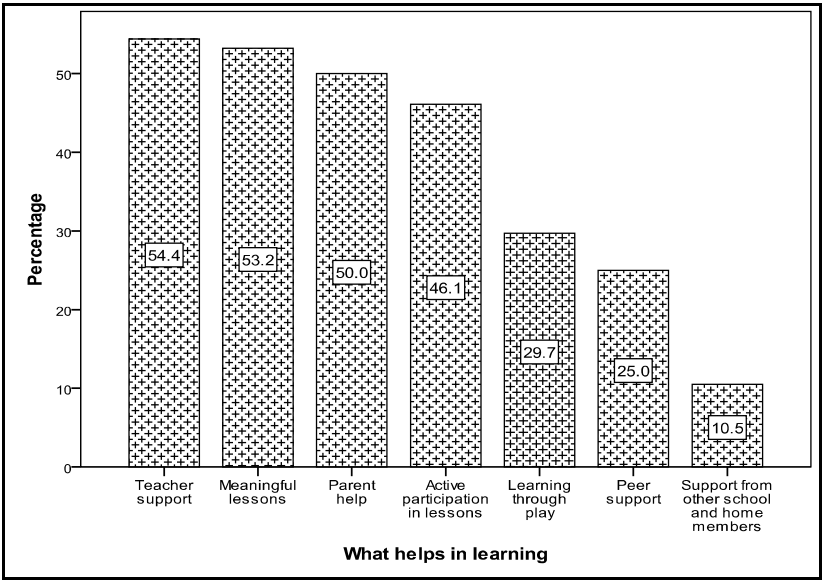

Figure 3.2: What helps pupils in learning

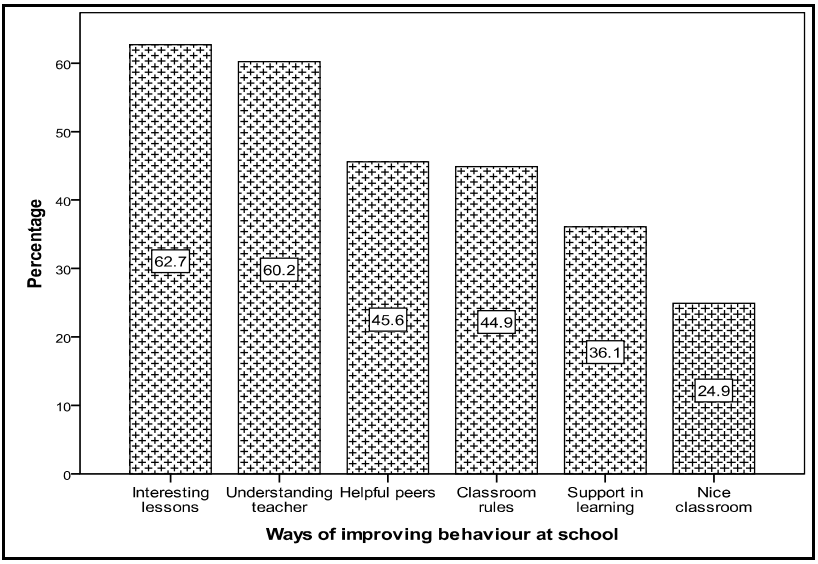

Figure 3.3: Pupil's suggestions on ways of improving behaviour

Figure 3.3 displays suggestions made by pupils of what help them improve their behaviour at school. Around 63% of pupils suggested more interesting lessons, 60% more understanding teachers, 46% more helpful peers, 45% good behaviour management such as classroom rules, while 25% mentioned attractive classrooms.

3.1.3 Individual home and community variables

Table 3.3 presents descriptive statistics for total difficulty scores by individual, home and community variables on the basis of teachers' and parents' evaluations. Significant differences between mean scores are marked in bold.

Table 3.3 shows that structural home factors such as locality, home language, family size, and parental education and occupation are not significantly related to SEBD. On the other hand, factors such as family dynamics and relationships are significant predictors: pupils' behaviour at home, their relationship with parents, siblings,

relatives and friends are all significantly related to SEBD according to both teachers and parents. Local community factors, such as neighbourhood safety and support, are weak predictors of SEBD.

Table 3.3: Mean total difficulty scores by individual home and community variables

Home and community variables		Total Difficulty Score (Year 4)			
		Teacher		Parent	
		Mean	St. Dev	Mean	St. Dev
Family Structure	2-parent family	**7.83**	5.658	**10.21**	6.141
	1-parent family	**10.78**	7.651	**13.38**	6.292
Family Size	1 child	8.63	6.287	10.48	6.443
	2 children	7.17	5.981	10.23	5.989
	3 children	8.42	5.527	10.23	6.685
	4 or more children	10.24	5.190	12.47	5.580
Father Occupation	Professional	**7.63**	5.707	9.53	5.676
	Clerical/Technical	**6.36**	4.942	9.54	5.491
	Skilled	**8.09**	5.190	10.77	6.678
	State income	**13.64**	8.947	11.78	6.140
Mother Occupation	Professional	7.34	5.090	8.89	5.034
	Clerical/Technical	6.86	5.918	11.19	7.202
	Skilled	8.73	5.922	11.00	6.300
	House carer	8.22	6.329	10.70	6.332
Father Education	Primary	9.86	5.210	10.88	8.560
	Secondary	8.53	6.151	11.15	6.652
	Post secondary	6.98	5.196	10.08	5.279
	Tertiary	6.80	4.978	8.11	4.981
Mother Education	Primary	8.00	3.916	9.83	9.326
	Secondary	8.44	6.486	11.00	6.373
	Post secondary	7.14	5.232	10.73	5.650
	Tertiary	7.78	4.660	8.24	5.070
Family Income	Less than €150	**12.41**	8.987	**14.23**	6.044
	€150 – €300	**8.05**	5.354	**10.85**	6.414
	More than €300	**6.74**	5.620	**9.05**	5.652
Family Time	Little	**12.73**	7.734	**18.44**	7.073
	Average	**7.96**	5.396	**10.42**	6.070
	A lot	**7.59**	6.063	**9.73**	5.741
Behaviour at home	Poor	**15.60**	10.62	**20.33**	4.726
	Moderate	**9.56**	5.643	**14.20**	6.039
	Good	**6.98**	5.321	**8.54**	5.244

Communication with parents	Poor	**15.50**	12.39	**18.33**	8.145
	Moderate	**10.97**	5.911	**15.75**	5.512
	Good	**7.25**	5.188	**9.21**	5.594
Relationship with siblings	Poor	**11.20**	9.257	**18.83**	9.020
	Moderate	**9.57**	7.020	**13.56**	5.882
	Good	**7.31**	5.265	**9.10**	5.404
Relationship with relatives	Moderate	**10.82**	7.435	**16.31**	7.040
	Good	**7.75**	5.488	**9.89**	5.805
Parent-reported Friends	Yes	**7.77**	5.539	**10.13**	5.884
	No	**16.20**	9.935	**22.80**	4.919
Membership in organization	Yes	7.87	5.653	10.40	6.310
	No	8.43	6.120	11.75	6.253
Participation in organization	Poor	8.50	7.419	**14.60**	5.103
	Moderate	8.57	5.907	**13.24**	5.864
	Regular	7.63	5.443	**9.48**	6.018
Family Cohesion	Little	**9.67**	7.638	**15.00**	8.718
	Average	**9.85**	5.684	**12.49**	5.895
	A lot	**7.54**	5.840	**9.84**	6.157
Family Conflict	With shouting	**9.68**	6.840	**14.38**	7.275
	Calm discussion	**7.66**	5.552	**9.33**	5.472
Parenting Stress	Very stressed	**9.76**	6.372	**13.98**	6.528
	Fairly stressed	**7.73**	5.633	**10.13**	5.861
	Not stressed	**6.78**	5.813	**6.46**	3.920
Parenting Difficulty	Very difficult	8.32	6.128	11.29	6.713
	Fairly difficult	7.29	5.002	9.52	5.158
	Not difficult	9.56	8.033	8.50	4.721
Parental Quality time	Moderate	9.21	6.210	**12.85**	6.429
	A lot	7.65	5.591	**9.84**	5.990
Parenting Supervision	Moderate	**9.46**	6.897	11.43	6.760
	A lot	**7.53**	5.263	10.15	5.951
Parenting Strategies	Discipline	**8.12**	5.535	**11.02**	6.182
	Punishment	**9.65**	6.581	**13.11**	6.400
	Rewards	**6.77**	5.077	**10.02**	5.515
	Persuasion	**7.22**	5.065	**8.93**	5.884
	Discussion	**6.66**	5.694	**8.94**	5.437
Neighbourhood Safety	Not safe	8.10	7.063	12.11	6.351
	Moderately safe	7.96	5.713	11.02	6.450
	Very safe	8.12	5.897	8.89	5.379
Neighbourhood Support	Not helpful	8.48	5.407	11.69	6.622
	Fairly helpful	7.57	6.018	10.39	6.035
	Very helpful	8.49	6.075	9.29	5.972

One parent families appear to have more children with SEBD according to both teachers' and parents' evaluations. Families with low incomes and whose father is on state income are more likely to have children with SEBD, while parental education appears also to be related to SEBD, though the relationship is not significant. Families with little time for their children, lack of cohesion and which use negative conflict resolution, are more likely to have children exhibiting SEBD. Parenting stress, lack of quality time with children, poor supervision and negative parenting are important predictors of SEBD. Punishment is more likely to be related with SEBD, while positive management strategies such as persuasion and discussion are associated with lower SDQ scores. Punishment is more likely to be used with boys than with girls.

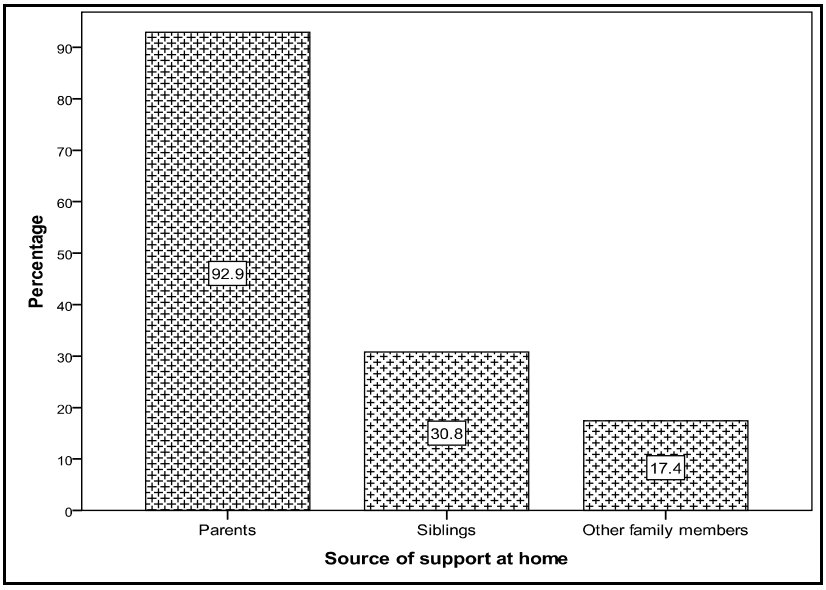

Figure 3.4: Source of pupil support at home

Figure 3.4 displays the source of pupil support at home. The vast majority of pupils (93%) identified their parents as the main source, followed by siblings (31%) and relatives (17%).

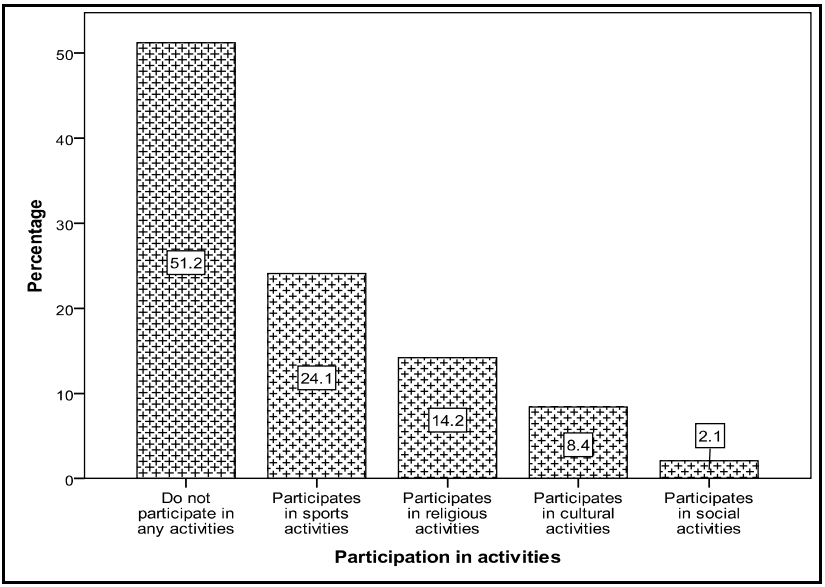

Figure 3.5: Pupils' participation in local community activities

On the other hand, Figure 3.5 shows that pupil membership and participation in organizations in the local community do not appear to be related to SEBD; indeed more than half of the pupils (51%) are not members of any organization. Participation in organizations is highest in sports activities (24%), followed by religious activities (14%), and cultural and social activities (11%). Boys are more likely to be members of sports organisations; whereas females are more likely to participate in social, cultural and religious organisations.

3.1.4 Regression analysis of individual variables

The major limitation of the One Way ANOVA test is that it only compares the mean difficulty scores across the levels of a sole predictor. On the other hand, multivariate regression takes into account several predictive variables simultaneously, thus modeling the difficulty scores with more accuracy. A backward procedure has

been used to identify the significant individual predictors of total difficulty when taken collectively and to rank the predictors by their contribution in explaining variation in the responses. As one can see from Table 3.4, the regression model based on teachers' evaluations identifies pupils' relationship with peers as the best predictor of total difficulty. This is followed by family time, pupils' engagement, father occupation, self-esteem, parental academic expectation, and child's behaviour at home. The regression model based on parents' evaluations identified parental academic expectations as the best predictor of total difficulty scores. This is followed by support from close friends, parenting stress, family conflict, family income, behaviour at home, participation in organizations, family time, academic progress, relationship with siblings, and repeating a year at school.

Table 3.4: Regression analysis of significant individual predictors

Total difficulty Score (Teacher Evaluations)		
Predictor	**F**	**P-value**
Teacher-reported relationship with peers	28.81	0.000
Family time	7.82	0.000
Teacher-reported engagement	7.64	0.001
Father occupation	6.11	0.001
Teacher-reported self esteem	4.99	0.008
Parental academic expectation	4.80	0.009
Behaviour at home	3.11	0.047
Total difficulty Score (Parent Evaluations)		
Predictor	**F**	**P-value**
Parental academic expectation	16.8	0.000
Support from close friends	7.81	0.001
Parenting stress	6.83	0.001
Family conflict	6.31	0.002
Family Income	5.45	0.005
Behaviour at home	5.39	0.007
Participation in organizations	5.16	0.008
Family time	4.65	0.011
Teacher-reported academic progress	4.63	0.013
Pupil-reported academic progress	3.99	0.023
Relationship with siblings	3.92	0.025
Repeating a year	4.70	0.034

Both the teachers' and parents' evaluations underline the role of parental academic expectations, peer relationships and support, and pupils' behaviour at home, as key predictors in SEBD. On the other hand, teachers and parents suggest different aspects of learning and relationships in predicting SEBD, with parents underlining more out-of-school factors. While teachers' responses suggest that poor relationships with peers, poor engagement and poor self-esteem are the strongest predictors of SEBD, parents' evaluations underline poor academic progress and repeating a year, as well as out-of-school factors such as lack of support from close friends, poor relationship with siblings, and lack of participation in organizations. The overall portrait underlines the key roles of school and home factors in putting young children at risk for SEBD. Year 4 pupils with poor self- esteem, poor relationships with peers, poor academic progress and learning difficulties, poor engagement and poor parental expectations are more at risk of manifesting SEBD. Pupils exhibiting behaviour problems at home and experiencing difficulties in relationships with siblings, and coming from poor families characterized by little quality time, high parenting stress and negative conflict management, are also at risk for developing SEBD.

3.2 SEBD by whole classroom variables

Table 3.5 shows the mean total difficulty scores by whole classroom variables according to both teachers' and parents' evaluations. With one exception (pupils' play), parents' evaluations do no suggest that classroom variables are important predictors of SEBD; teachers on the other hand, suggest that pupils' participation and collaboration in learning and their sense of classroom community are very important factors in SEBD. It is interesting to note that neither parents nor teachers' evaluations indicate pupils' involvement in decision making as important for the development of SEBD; similarly with regards to classroom resources and teacher training. The latter may be partly explained to the fact that none of the teachers indicated inadequate training in dealing with SEBD.

Table 3.5: Mean total difficulty scores by whole classroom variables

Classroom variables		Total Difficulty Score (Year 4)			
		Teacher		Parent	
		Mean	St. Dev	Mean	St. Dev
Pupils' participation during lessons	Poor	**20.0**	7.00	16.0	1.41
	Average	**10.3**	6.92	10.7	5.95
	High	**8.41**	5.93	10.0	6.21
Pupils' involvement in decision taking	Poor	9.56	6.36	11.7	6.85
	Average	9.39	6.76	10.4	6.26
	High	8.69	5.87	9.92	5.94
Pupils' collaboration in learning	Poor	**13.5**	9.19	14.0	4.24
	Average	**10.9**	7.36	10.8	6.13
	High	**8.05**	5.69	8.86	6.08
Pupils' behaviour during play	Poor	10.6	10.5	**14.0**	14.1
	Average	9.29	6.59	**10.6**	6.33
	Good	8.52	5.98	**9.77**	5.81
Pupils' sense of classroom community	Poor	**16.5**	16.3	11.0	9.90
	Average	**13.1**	8.61	10.1	7.20
	High	**8.60**	6.03	10.0	6.03
Classroom resources	Not adequate	11.4	7.96	10.9	6.17
	Adequate	9.43	6.20	10.3	6.10
	Very adequate	9.04	5.18	8.84	6.55
Teachers' training	Adequate	8.94	6.78	10.8	6.43
	Very good	8.95	5.90	9.56	5.79

Figure 3.6 shows that teachers tend to use positive behaviour management in their classroom with classroom rules being the most popular strategy and punishment the least used. Other strategies, including reward, individual teaching assistance and dealing with student's socio emotional wellbeing are also frequently used.

Regression analysis was used to identify the significant predictors of total difficulty using backward procedure. The number of classroom related predictors that were found to be significantly related to SEBD was very small. Table 3.6 shows that according to teachers' evaluations, pupils' lack of classroom community was found to be the best whole classroom predictor, followed by pupils' participation during lessons.

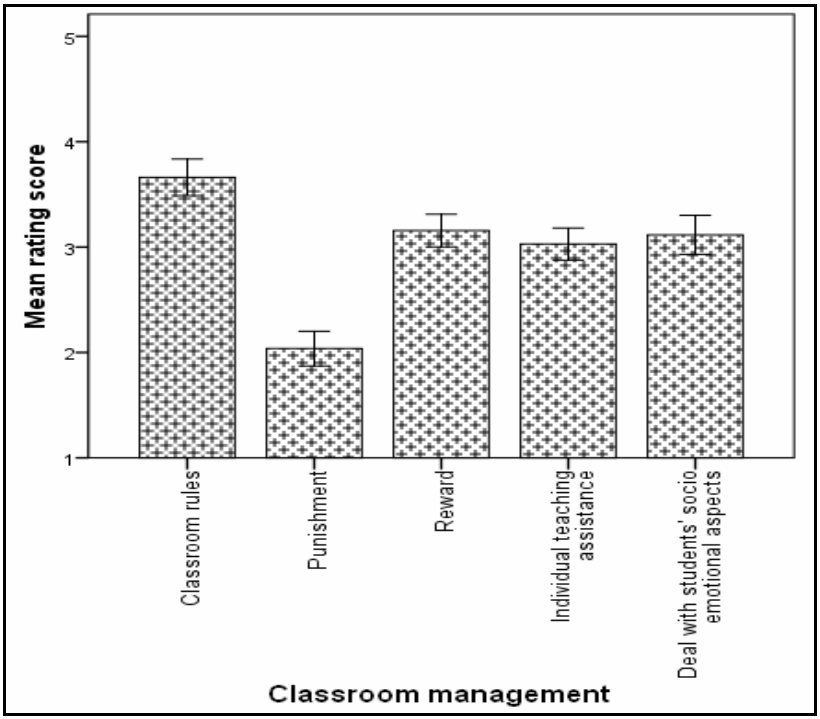

Figure 3.6: Classroom management

The regression model for parents' evaluation, on the other hand, suggests that pupils' behaviour during play is the single significant classroom predictor. Other predictors were found to contribute marginally to the total variance in total difficulty scores.

Table 3.6: Regression analysis of the whole classroom variables

Total difficulty scores (Teacher Evaluations)		
Predictor	**F**	**P-value**
Pupils' sense of classroom community	8.21	0.000
Pupils' participation during lessons	6.47	0.002
Total difficulty scores (Parent Evaluations)		
Predictor	**F**	**P-value**
Pupils' behaviour during play	3.80	0.024

3.3 SEBD by whole school variables

Table 3.7 shows the mean total difficulty scores of the whole school variables. Mean total difficulty scores that differ significantly are marked in bold. In contrast to individual characteristics, very few whole school variables featured as strong indicators of SEBD.

Table 3.7: Mean total difficulty scores of whole school variables

School variables		Total Difficulty Score (Year 4)			
		Teacher		Parent	
		Mean	St. Dev	Mean	St. Dev
Pupils' behaviour	Average	**9.83**	6.268	10.52	6.265
	Good	**8.36**	6.425	9.86	6.020
Pupils' support and collaboration	Average	**9.89**	6.567	10.98	6.367
	Good	**7.46**	5.821	9.81	6.013
Pupils' engagement in school activities	Average	9.77	7.210	10.82	5.508
	Good	8.56	5.921	9.14	6.418
Pupils' participation in decisions	Poor	9.47	7.028	10.55	6.153
	Average	8.74	5.957	9.99	6.309
	Good	6.72	4.012	9.80	5.181
Bullying	A lot	9.52	6.947	10.25	6.524
	Occasional	9.20	6.854	10.27	6.113
	Low	8.70	5.876	9.70	6.199
Staff participation in school activities	Low	9.18	6.195	11.50	0.707
	Average	8.87	6.675	10.19	6.093
	High	5.43	4.237	10.24	6.301
Staff participation in decisions	Low	8.74	6.638	10.47	6.366
	Average	9.21	6.531	9.96	5.696
	High	8.41	4.940	10.67	7.662
Staff teamwork	Low	9.19	6.477	10.78	6.613
	Average	8.96	6.232	10.08	5.915
	High	8.11	6.879	8.82	5.411
Staff support and collegiality	Low	9.32	7.083	10.38	5.965
	Average	9.36	6.453	9.74	5.826
	High	8.80	6.085	10.19	6.484
Administrative support	Low	9.05	6.422	10.40	5.210
	Average	9.30	6.869	10.04	6.316
	High	9.01	5.836	10.00	6.149

None of the school variables are significant according to the parents' responses, while only two predictors were found significant according to teachers' evaluations. Pupils' behaviour at school and their support and collaboration are the only two significant factors at whole school level. The data also suggests that SEBD is more likely to be prevalent in schools where bullying is high and pupils' participation in decisions is low, and where staff collaboration, support, collegiality, participation in school activities, and administrative support are low; however, these predictors are not significant.

Regression analysis was used to identify the significant predictors of total difficulty using backward procedure. The number of school related predictors that were found to be significantly related to SEBD was very small, indicating that school-related variables explain a very small portion of the variation in the total difficulty scores. As one can see from Table 3.8, the regression model identifies pupils' support and collaboration as the sole significant whole school predictor (teachers' evaluations).

Table 3.8: Regression analysis of whole school variables

Total difficulty scores of Year 4 pupils (Teacher Evaluation)		
Predictor	**F**	**P-value**
Pupils' support and collaboration	11.80	0.001

3.4 Conclusion

A final task was carried out by fitting regression models that relate total difficulty scores to all significant individual, classroom, school, home and community variables for both teachers' and parents' evaluations. A backward procedure was again used to identify the parsimonious models that include solely the dominant predictors of SEBD. The regression model that fits pupils' difficulty scores identifies respectively eight and seven dominant predictors for teachers' and parents' evaluations.

Table 3.9: Significant predictors by teachers' evaluation

Total difficulty scores of Year 4 pupils (Teacher Evaluation)		
Predictor	**F**	**P-value**
Teacher-reported relationship with peers	23.96	0.000
Teacher-reported engagement	8.404	0.000
Pupils' sense of classroom community	7.862	0.006
Father occupation	3.661	0.014
Family time	4.267	0.016
Parental academic expectation	3.378	0.036
Teacher-reported self esteem	3.229	0.042
Behaviour at home	3.068	0.049

Table 3.9 shows that five of these predictors are individual variables mostly related to behaviour, relationships and learning; two are home related variables and the last predictor is a whole classroom factor. Pupil's relationship with peers is the best predictor, followed by engagement, pupils' sense of classroom community, father occupation, family time, parental academic expectation, self-esteem and behaviour at home. This eight-predictor parsimonious model explains 58.9% of the total variation in the difficulty scores.

Table 3.10: Significant predictors by parents' evaluation

Total difficulty scores of Year 4 pupils (Parent Evaluation)		
Predictor	**F**	**P-value**
Parental academic expectation	35.71	0.000
Family time	7.196	0.001
Repeating year	10.02	0.002
Support from close friends	6.150	0.003
Pupils' behaviour during play	4.983	0.009
Behaviour at home	4.926	0.009
Relationship with siblings	4.236	0.017

Table 3.10 shows that five of these predictors are individual variables mostly related to behaviour, relationships and learning; one is a home variable and the last predictor a whole classroom variable. Parental academic expectation is the best predictor of total difficulty, followed by family time, repeating a year, support from close friends

behaviour during play and at home and relationship with siblings. This seven-predictor parsimonious model explains 65.5% of the total variation in the responses.

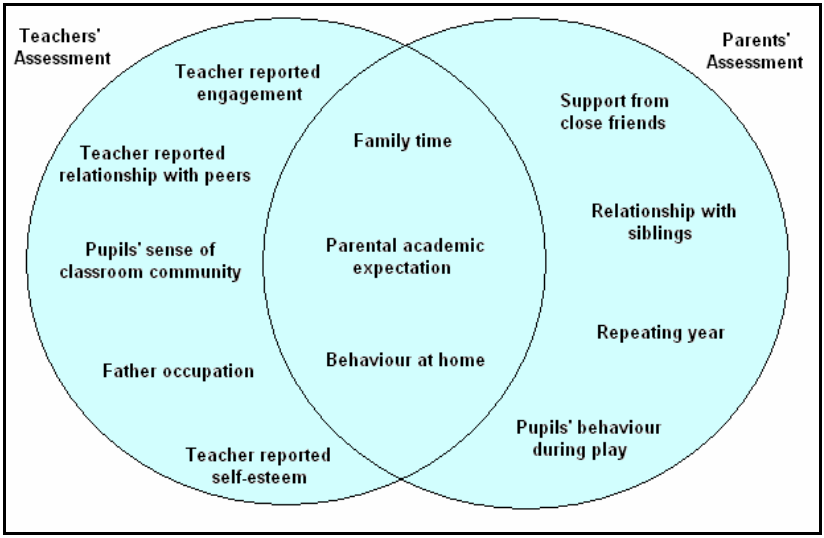

Figure 3.7: Best predictors of total difficulty scores of Year 4 pupils

Figure 3.7 shows that parental academic expectation, family time and behaviour at home are significant predictors in both teachers' and parents' evaluations, while none of the whole school variables were found to contribute significantly in explaining variation in the total difficulty scores when included with other individual, classroom, home and community variables. Year 4 pupils most at risk for SEBD are those who are poorly engaged in classroom activities, are repeating a year, have poor relationships with peers and siblings, lack support from close friends and show behaviour difficulties at home. They attend classrooms where pupils exhibit poor play behaviour and low sense of community, and come from families with low parental academic expectations, little family time, and where the father is poorly skilled or unemployed. Figures 3.8-3.19 exhibit differences in the mean difficulty scores for the significant predictors.

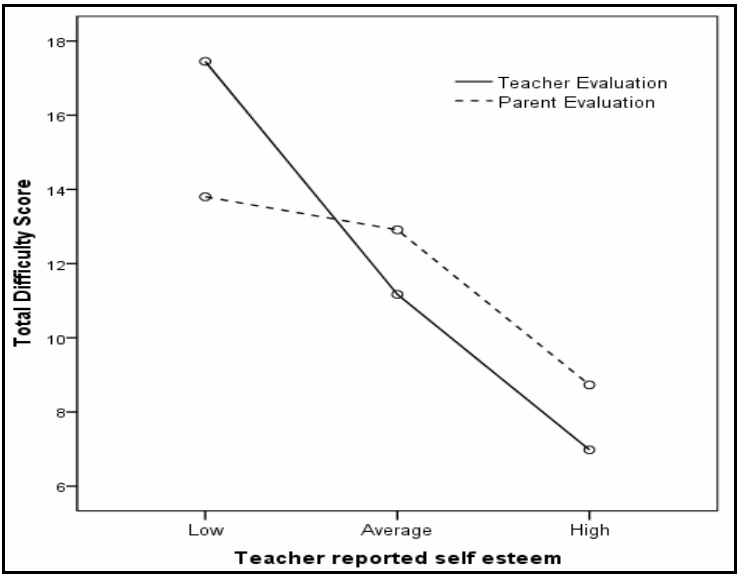

Figure 3.8: Total difficulty scores by teacher-reported self-esteem

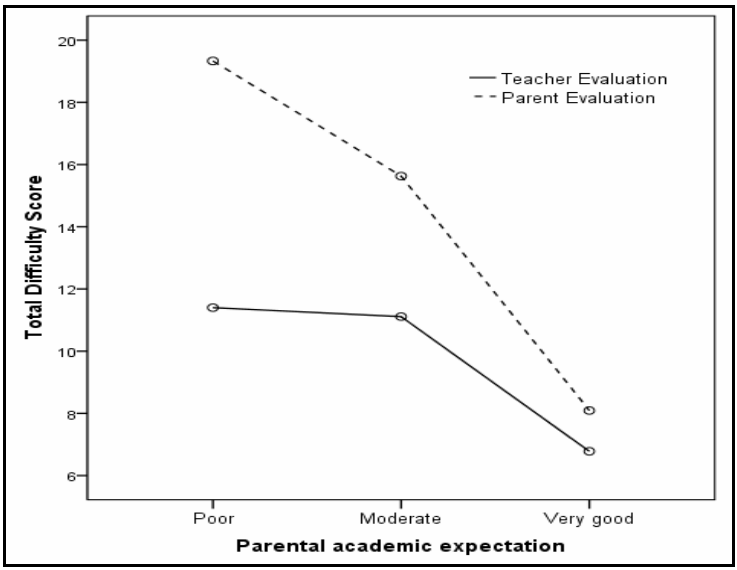

Figure 3.9: Total difficulty by parental academic expectations

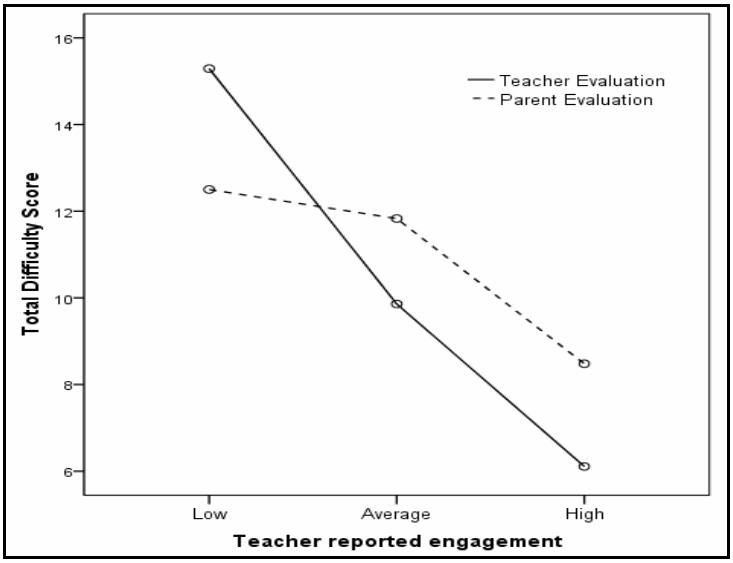

Figure 3.10: Total difficulty scores by teacher-reported engagement

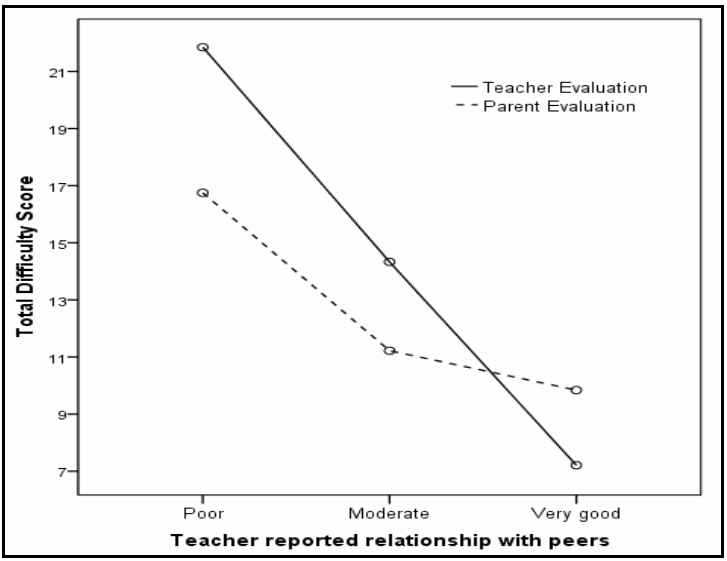

Figure 3.11: Total difficulty scores by teacher-reported pupil relationship with peers

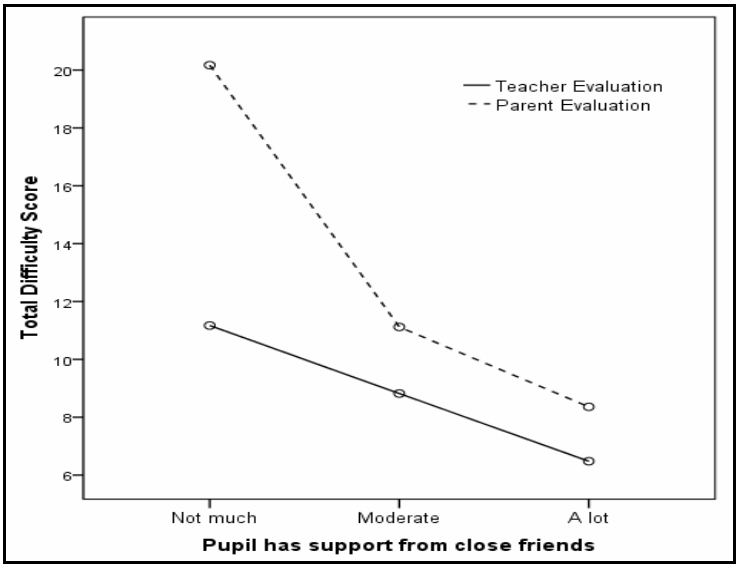

Figure 3.12: Total difficulty by pupil support from close friends

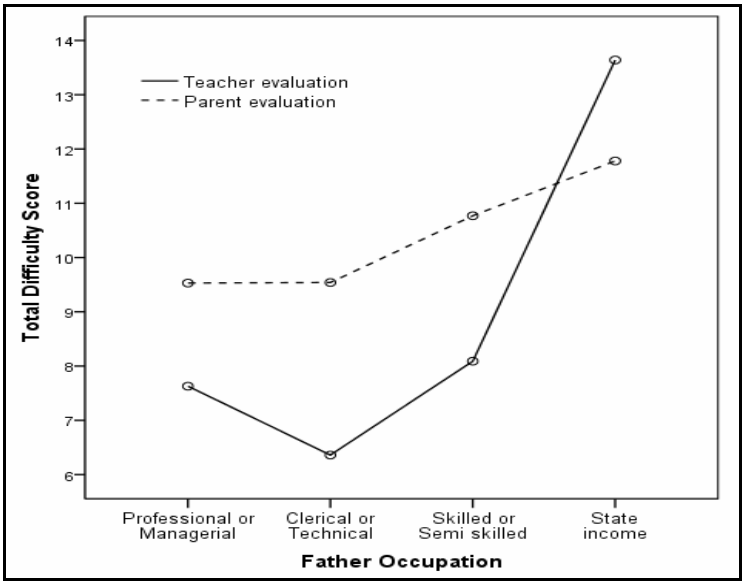

Figure 3.13: Total difficulty scores by father occupation

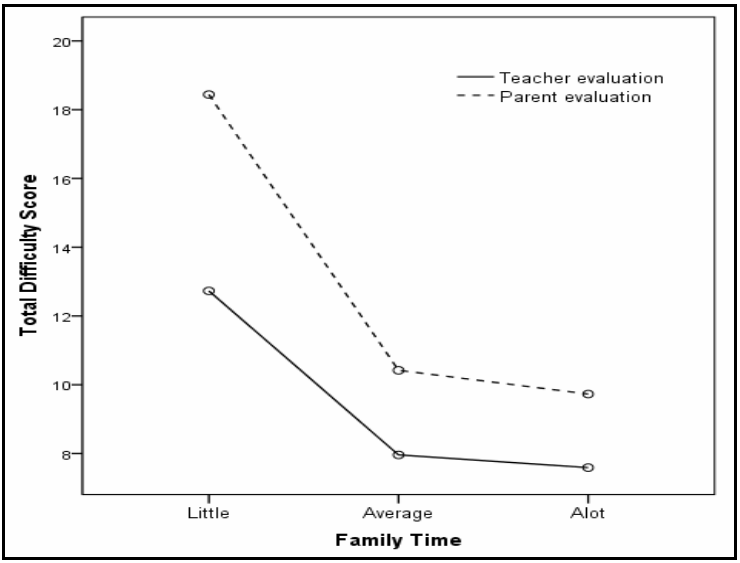

Figure 3.14: Total difficulty scores by family time

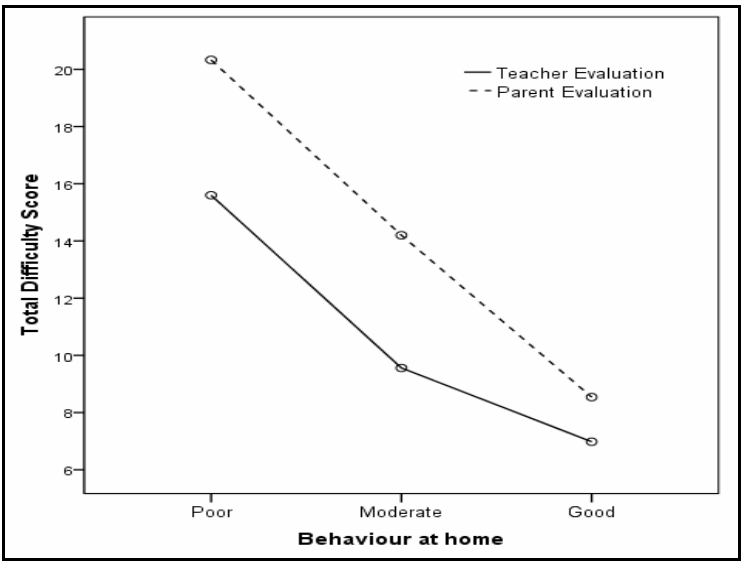

Figure 3.15: Total difficulty scores by pupil's behaviour at home

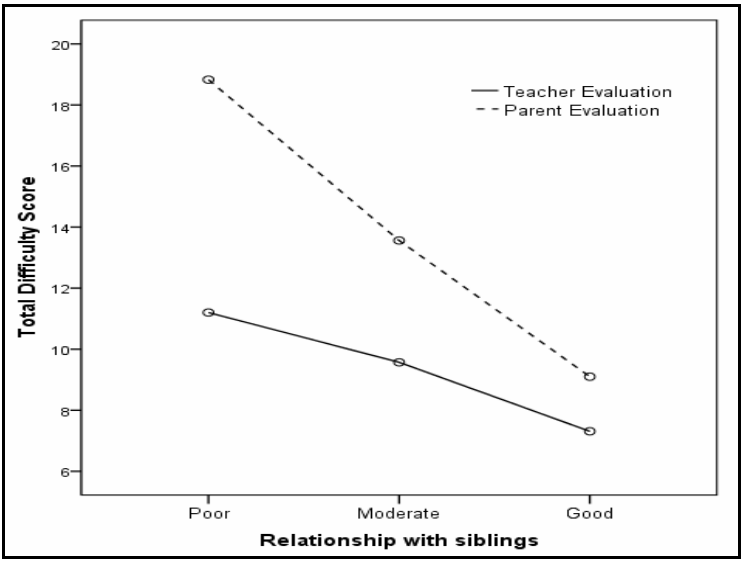

Figure 3.16: Total difficulty by pupils' relationship with siblings

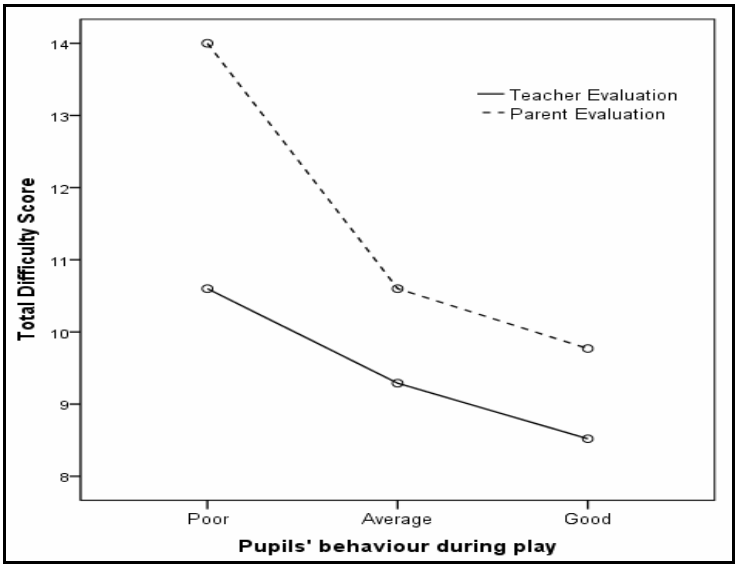

Figure 3.17: Total difficulty scores by pupils' behaviour during play

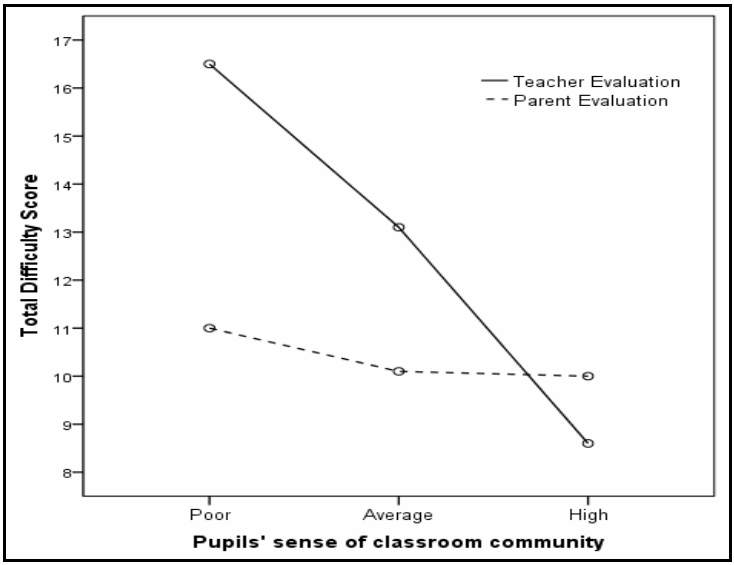

Figure 3.18: Total difficulty by sense of classroom community

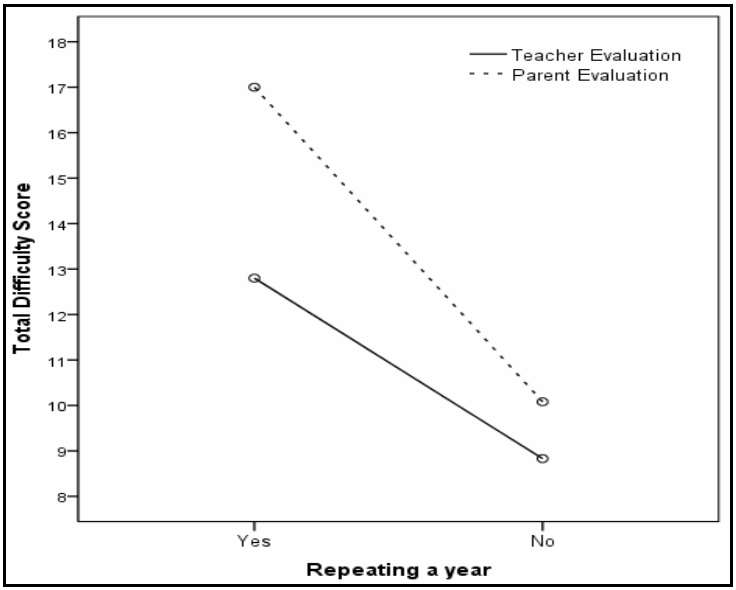

Figure 3.19: Total difficulty score by repeating a year

4 Prosocial behaviour by individual, school and home factors in Year 4

This chapter explores the relationship between prosocial behaviour and a range of individual, class, school and home variables. The first section presents the teachers' and parents' mean prosocial scores by individual variables, clustered into three groups, namely individual characteristic, classroom, school, community and home variables. The results of the ANOVA regression analysis at the end of the section identify the significant predictors within each cluster of individual variables. The chapter then similarly examines the whole classroom and whole school variables explored in the study, concluding with a final regression analysis analyzing all the significant predictors together.

4.1 Prosocial behaviour by individual variables

4.1.1 Individual characteristics variables

Table 4.1 provides descriptive statistics for the prosocial behaviour scores categorised by individual characteristics variables using both teachers' and parents' evaluations. Mean prosocial scores that differ significantly are marked bold.

Table 4.1: Mean prosocial scores by individual characteristics

Individual variables (Characteristics)		Prosocial Score (Year 4)			
		Teacher		Parent	
		Mean	St. Dev	Mean	St. Dev
Gender	Male	**7.44**	2.399	**8.51**	1.734
	Female	**8.31**	2.112	**9.29**	1.577
Language	Maltese	7.85	2.318	8.84	1.433
	English/other	8.80	1.732	9.25	2.050
Locality	North harbour	8.32	1.942	9.02	2.112
	South harbour	8.16	2.035	8.44	1.734
	South Eastern	8.67	1.992	9.27	1.402
	Western	8.74	1.855	9.27	1.206
	Northern	7.59	2.532	8.72	1.529
	Gozo	7.63	2.553	8.41	1.734
Illness or disability	Yes	**7.32**	2.533	**8.00**	2.132
	No	**8.34**	2.076	**9.06**	1.597
Medication or therapy	Yes	**7.11**	2.622	**7.90**	2.119
	No	**8.35**	2.067	**9.06**	1.602
Communication	Poor	**6.37**	3.008	**8.33**	2.066
	Adequate	**6.59**	2.455	**8.29**	1.840
	Very good	**8.40**	1.981	**9.06**	1.294
Teacher reported self-esteem	Low	**5.65**	2.390	8.01	1.304
	Average	**7.69**	2.311	8.49	1.671
	High	**8.25**	2.134	9.06	1.362
Parent reported self-esteem	Low	8.09	2.360	**7.67**	2.066
	Average	8.27	2.070	**8.76**	1.677
	High	8.51	2.186	**9.10**	1.668
Teacher reported self-efficacy	Low	**6.38**	2.499	8.40	1.265
	Average	**7.66**	2.336	8.68	1.613
	High	**8.33**	2.106	9.01	1.386
Parent reported self-efficacy	Low	8.00	2.330	**6.20**	1.304
	Average	8.22	2.172	**8.65**	1.636
	High	8.26	2.127	**9.28**	1.626

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One of the most evident findings is that female pupils are more prosocial than males according to both teachers' and parents' evaluations. Being free from health problems and disability and not undergoing any medical or psycho-educational interventions are also significantly related to prosocial behaviour, as well as individual personality characteristics such as good communication, positive

self-esteem and high self-efficacy. On the other hand, locality and language do not appear to be related to prosocial behaviour amongst Year 4 pupils.

4.1.2 Individual classroom and school variables

Table 4.2 presents the mean prosocial behaviour scores of individual classroom and school variables by teachers' and parents' evaluations.

Table 4.2: Mean prosocial scores by individual classroom and school variables

Individual variables (Learning)		Prosocial Score (Year 4)			
		Teacher		Parent	
		Mean	St. Dev	Mean	St. Dev
Teacher reported academic progress	Poor	**6.87**	2.809	8.82	1.510
	Average	**7.61**	2.153	8.88	1.468
	Very good	8.36	2.077	8.87	1.500
Pupil reported academic progress	Poor	6.95	2.417	8.71	4.348
	Average	8.04	2.106	8.77	1.476
	Very good	7.99	2.278	8.90	1.502
Teacher academic expectation	Poor	**6.17**	2.864	8.40	0.843
	Moderate	**7.85**	2.199	8.76	1.540
	Good	**8.26**	2.079	8.86	1.505
Parental academic expectation	Poor	7.30	2.669	**7.33**	1.751
	Moderate	8.27	2.103	**8.45**	1.860
	Good	8.26	2.118	**9.17**	1.580
Learning difficulties	Many	**6.35**	3.297	8.25	6.850
	Some	**8.01**	2.084	8.83	1.443
	None	**8.09**	2.147	8.96	1.469
Teacher reported learning support	Yes	7.37	2.760	8.28	1.934
	No	7.99	2.207	8.95	1.408
Pupil-reported support	Not much	7.73	2.546	8.56	2.773
	Moderate	7.89	2.181	8.72	1.563
	A lot	8.06	2.162	8.97	1.385
Peer support with work	Not much	8.42	1.708	8.95	3.086
	Moderate	7.79	2.287	8.70	1.660
	A lot	8.00	2.248	9.08	1.234

Support with homework	Not much	8.48	1.892	9.26	1.241
	Moderate	8.03	2.340	8.66	1.724
	A lot	8.18	2.143	8.92	2.037
Repeating a year	Yes	**6.20**	3.645	8.33	2.887
	No	**7.99**	2.212	8.90	1.455
Teacher reported engagement	Low	**6.35**	2.512	**8.44**	1.825
	Average	**7.70**	2.263	**8.56**	1.489
	High	**8.62**	1.929	**9.24**	1.278
Pupil reported engagement	Low	**6.84**	2.749	**8.67**	2.062
	Average	**8.08**	2.022	**8.55**	1.491
	High	**8.03**	2.262	**9.20**	1.777
Attendance	Regular	7.94	2.256	8.87	1.475
	Irregular	7.07	2.947	8.60	2.000
Teachers-parent communication	Poor	**5.18**	2.676	8.20	1.264
	Moderate	**6.36**	2.105	8.62	1.557
	Good	**8.30**	2.054	8.87	1.487
Parent-school communication	Moderate	7.82	2.046	8.74	2.213
	Good	8.38	2.155	9.02	1.422
Teacher-pupil relationship	Moderate	**5.89**	2.119	8.56	1.965
	Very good	**8.24**	2.149	8.91	1.425
Pupil-teacher relationship	Poor	**6.90**	2.143	8.50	4.243
	Moderate	**7.51**	2.430	8.69	1.686
	Very good	**8.28**	2.055	8.97	1.364
Teacher reported relationship with peers	Poor	**5.30**	2.614	8.00	2.449
	Moderate	**6.66**	2.165	9.04	1.480
	Very good	**8.37**	2.010	9.26	1.457
Pupil reported relationship with peers	Poor	7.26	2.848	8.14	1.574
	Moderate	7.81	2.143	8.65	2.254
	Very good	8.09	2.160	9.03	1.372
Friends at school	Yes	**8.00**	2.256	8.87	1.463
	No	**6.50**	2.312	8.75	2.500
Close friends at school	Yes	7.96	2.191	8.95	1.698
	No	7.93	2.868	8.00	1.789
Support from close friends	Not at all	**7.00**	2.098	8.17	1.602
	Moderate	**7.99**	2.347	8.78	1.637
	A lot	**8.59**	1.815	9.24	1.746
Pupil plays with peers	Not much	6.57	3.599	8.00	1.414
	Moderate	8.40	1.943	8.52	1.569
	A lot	8.92	2.206	9.01	1.703

Good academic progress, high teacher and parent academic expectations, active pupil engagement in learning and lack of learning difficulties are all related to prosocial behaviour, again underlining the inextricable link between learning and behaviour displayed in Table 4.2. On the other hand, however, support with learning from the teacher, peers and parents, did not feature as important predictors of prosocial behaviour, suggesting that learning difficulties and needing support may be more indicative of SEBD as exhibited in Chapter 3. Good communication between teachers and parents is significantly related to prosocial behaviour on the basis of teachers' evaluations.

Classroom relationships are significantly related to prosocial behaviour according to the teachers' evaluations, with a similar, though not significant trend, emerging from the parents' evaluations. The teacher-pupils/pupils-teacher relationships stand as very strong predictors of prosocial behaviour; evaluations from parents suggest a similar trend, though the relationships are not significant at the 0.05 level of significance. Relationships with peers, having friends at school, and support by close friends also feature as important predictors of pupils' prosocial behaviour. On the other hand, pupils' play with peers was found to be a weak predictor of prosocial behaviour in both teachers' and parents' evaluations.

4.1.3 Individual home and community variables

Table 4.3 presents descriptive statistics for the prosocial scores by individual home and community variables according to teachers' and parents' evaluations.

Relatively few home-related factors have been found to be significantly related to prosocial behaviour, while community variables such as involvement in community organizations and neighbourhood safety and support were not related. Table 4.3 demonstrates that good behaviour at home, and good relationships between child and parents and relatives, feature as strong predictors

of prosocial behaviour, based on parents' evaluations but supported by similar trends in the teachers' evaluations. Good relationship with siblings may also be weakly associated with prosocial behaviour.

Table 4.3: Mean prosocial scores by individual home and community variables

Home and community variables		Prosocial Score (Year 4)			
		Teacher		Parent	
		Mean	St. Dev	Mean	St. Dev
Family Structure	2-parent family	**8.32**	2.047	**8.99**	1.646
	1-parent family	**7.43**	2.744	**8.44**	1.965
Family Size	1 child	7.92	2.361	8.36	2.013
	2 children	8.43	2.052	9.04	1.702
	3 children	8.27	1.910	8.93	1.561
	4 or more children	7.96	2.475	8.58	1.105
Father Occupation	Professional	7.93	2.272	8.81	1.507
	Clerical/Technical	8.55	1.994	9.22	2.297
	Skilled	8.42	1.987	9.03	1.284
	State income	7.40	2.459	8.00	1.826
Mother Occupation	Professional	8.36	1.954	**8.84**	1.763
	Clerical/Technical	8.00	2.025	**8.10**	1.814
	Skilled	8.73	2.017	**9.21**	1.251
	House carer	8.24	2.211	**9.19**	1.619
Father Education	Primary	8.14	2.116	8.38	1.598
	Secondary	8.21	2.133	8.85	1.402
	Post secondary	8.33	2.147	9.06	2.142
	Tertiary	8.33	2.105	9.14	1.665
Mother Education	Primary	7.75	2.217	7.83	1.722
	Secondary	8.23	2.158	9.08	1.647
	Post secondary	8.76	1.690	8.98	1.532
	Tertiary	8.48	2.326	8.65	1.889
Family Income	Less than €150	7.94	2.193	8.46	1.854
	€150 – €300	8.33	2.066	8.81	1.839
	More than €300	8.21	2.270	9.18	1.373
Family Time	Little	7.36	3.139	**7.33**	1.500
	Average	8.31	2.061	**8.95**	1.375
	A lot	8.25	2.104	**9.07**	2.016
Behaviour at home	Poor	6.80	2.168	**6.33**	1.528
	Moderate	8.17	2.121	**8.34**	1.758
	Good	8.30	2.147	**9.25**	1.564

Communication with parents	Poor	7.00	2.449	**6.00**	1.000
	Moderate	8.03	2.236	**8.00**	1.685
	Good	8.31	2.104	**9.19**	1.611
Relationship with siblings	Poor	8.00	1.732	8.33	1.862
	Moderate	8.26	2.187	8.73	1.519
	Good	8.31	2.032	9.18	1.666
Relationship with relatives	Moderate	7.94	2.076	**7.69**	2.152
	Good	8.27	2.139	**9.05**	1.627
Parent-reported Friends	Yes	8.25	2.144	8.98	1.676
	No	7.40	2.074	7.60	2.302
Membership in Organization	Yes	8.17	2.090	8.90	1.503
	No	8.26	2.323	8.81	2.693
Participation in organization	Poor	8.07	2.200	8.10	1.853
	Moderate	8.09	2.214	8.62	2.012
	Regular	8.24	2.109	9.01	1.311
Family Cohesion	Little	6.00	4.359	8.33	2.082
	Average	8.06	2.250	8.68	1.695
	A lot	8.34	2.061	8.98	1.704
Family Conflict	With shouting	8.11	2.370	**8.40**	1.624
	Calm discussion	8.32	2.064	**9.03**	1.722
Parenting Stress	Very stressed	8.06	2.401	8.64	1.569
	Fairly stressed	8.34	2.027	9.01	1.819
	Not stressed	8.09	2.263	8.93	1.359
Parenting Difficulty	Very difficult	8.21	2.138	8.85	1.811
	Fairly difficult	8.23	2.142	8.98	1.558
	Not difficult	9.11	1.965	9.50	0.756
Parental Quality time	Moderate	8.00	2.331	8.63	1.593
	A lot	8.31	2.085	9.04	1.683
Parenting Supervision	Moderate	8.32	2.494	8.73	1.500
	A lot	8.22	2.017	9.00	1.752
Parenting Strategies	Discipline	8.18	2.265	8.75	1.736
	Punishment	8.09	2.293	8.44	1.816
	Rewards	8.33	2.028	8.95	1.506
	Persuasion	8.48	2.029	9.32	1.745
	Discussion	8.35	2.166	9.23	1.332
Neighbourhood Safety	Not safe	8.50	2.039	9.22	3.300
	Moderately safe	8.06	2.301	8.82	1.418
	Very safe	8.51	1.815	9.00	1.526
Neighbourhood Support	Not helpful	7.95	2.228	8.60	1.791
	Fairly helpful	8.32	2.045	9.17	1.743
	Very helpful	8.51	2.079	8.84	1.397

The data suggests that children coming from two-parent families are more likely to exhibit prosocial behaviour, with support from both teachers' and parents' evaluations. Children in families which spend quality time together and solve conflicts constructively are also likely to engage in prosocial behaviour (parents' evaluations). With the exception of mother occupation (parents' evaluation), all the other indicators of socio-economic status (parental education, occupation and family income) and other family dynamics such as supervision, parenting strategies and parenting stress, did not feature as predictors of prosocial behaviour.

4.1.4 Regression analysis of individual variables

A backward regression procedure was used to identify the significant individual predictors of prosocial behaviour taken collectively and to rank them by their contribution in explaining variation in the responses. Table 4.4 shows that pupils' relationship with peers is the best predictor of prosocial behaviour based on teachers' evaluations. This is followed by good teacher-parent communication, child's gender and family structure. On the other hand, the parents' evaluations identify self-efficacy as the best predictor, followed by child's communication with parents, self-esteem, family time, gender (females), lack of family conflict and good behaviour at home. Teachers' and parents' evaluations both indicate that gender is a clear predictor of prosocial behaviour, but while teachers' evaluations underline more pupil relationships as other key predictors, parents' evaluations indicate more personality and family factors such as high self-efficacy, positive self-esteem, good communication with parents, and good behaviour at home. Year 4 female pupils with high self-efficacy and self-esteem, coming from two parent families which spend good quality time together and solve conflicts constructively, who have good relationships with peers and with parents and behave well at home, and whose teachers and parents collaborate together are more likely to exhibit prosocial behaviour.

Table 4.4: Regression analysis of individual variables

Prosocial scores of Year 4 students (Teacher Evaluations)		
Predictor	**F**	**P-value**
Teacher-reported relationship with peers	18.640	0.000
Teacher-parent communication	14.508	0.000
Gender	14.958	0.000
Family structure	4.309	0.039
Parent Evaluations		
Parent reported self-efficacy	6.145	0.003
Communication with parents	4.167	0.017
Parent reported self-esteem	4.131	0.018
Family time	4.047	0.019
Gender	4.508	0.035
Family conflict	4.194	0.042
Behaviour at home	3.135	0.046

4.2 Prosocial behaviour by whole classroom variables

Table 4.5 displays the mean prosocial scores of classroom variables by teachers' and parents' evaluations. In contrast to individual characteristics, whole classroom factors did not feature as strong predictors of prosocial behaviour.

Table 4.5: Mean prosocial scores by whole classroom variables

Classroom variables		Prosocial Score (Year 4)			
		Teacher		Parent	
		Mean	St. Dev	Mean	St. Dev
Pupils' participation during lessons	Poor	**5.67**	2.517	8.50	0.707
	Average	**7.39**	2.238	8.85	1.433
	High	**8.05**	2.285	8.85	1.520
Pupils' involvement in decision taking	Poor	7.48	7.48	7.48	2.502
	Average	7.81	7.81	7.81	2.285
	High	8.12	8.12	8.12	2.281
Pupils' collaboration in learning	Poor	**5.50**	4.950	8.49	1.563
	Average	**7.59**	2.383	8.68	1.423
	High	**8.06**	2.232	8.85	1.532

Pupils' behaviour during play	Poor	7.66	2.268	8.23	1.526
	Average	7.71	2.418	8.74	1.381
	Good	8.09	2.192	8.81	1.582
Pupils' sense of classroom community	Poor	6.50	2.121	8.36	1.118
	Average	7.39	2.033	8.64	1.286
	High	7.96	2.315	8.87	1.519
Classroom resources	Not adequate	7.35	2.149	8.79	1.357
	Adequate	7.89	2.362	8.80	1.510
	Very adequate	8.51	2.032	9.22	1.536
Teachers' training	Adequate	**7.48**	2.446	8.75	1.480
	Very good	**8.22**	2.141	9.00	1.523

Table 4.5 shows that none of the parents' evaluations are significant. According to teachers' evaluations, collaboration in learning, pupils' active participation during lessons and good teacher training are predictors of prosocial behaviour. Interestingly sense of classroom community, pupils' involvement in decision making and good play behaviour, were not found to be predictive of prosocial behaviour, though there are indications that these three factors may be somewhat related to prosocial behaviour

Table 4.6: Regression analysis of whole classroom variables

Prosocial scores of Year 4 students (Teacher Evaluation)		
Predictor	**F**	**P-value**
Pupils' participation during lessons	9.669	0.002
Pupils' collaboration in learning	3.612	0.028

Table 4.6 shows that the number of significant whole classroom predictors identified by regression analysis is very small. The regression model of teachers' evaluations indicates that pupils who participate actively during lessons and collaborate together in learning are more likely to behave prosocially. Parents' evaluations suggest that no whole classroom predictor contributed significantly in explaining total variance in the prosocial scores at the 0.05 level of significance.

4.3 Prosocial behaviour by whole-school variables

Table 4.7 shows the mean prosocial scores of whole school variables by teachers' and parents' evaluations. As in the case of whole classroom variables, they have been found to be very weak predictors of prosocial behaviour.

Table 4.7: Mean prosocial scores by whole school variables

School variables		Prosocial Score (Year 4)			
		Teacher		Parent	
		Mean	St. Dev	Mean	St. Dev
Pupils' behaviour	Average	**7.63**	2.506	8.79	1.482
	Good	**8.10**	2.132	8.91	1.510
Pupils' support and collaboration	Average	**7.65**	2.408	8.83	1.739
	Good	**8.32**	2.054	8.88	1.349
Pupils' engagement in school activities	Average	7.72	2.183	8.74	1.383
	Good	8.00	2.355	8.92	1.555
Pupils' participation in decisions	Poor	7.77	2.312	8.82	1.466
	Average	7.99	2.319	8.86	1.583
	Good	8.22	2.045	9.10	0.994
Bullying	A lot	7.54	2.047	8.67	1.775
	Occasional	7.80	2.350	8.87	1.446
	Low	7.96	2.296	8.96	1.520
Staff participation in school activities	Low	7.43	1.134	8.50	0.707
	Average	7.77	2.312	8.76	1.432
	High	7.96	2.308	8.95	1.565
Staff participation in decisions	Low	8.13	2.311	8.81	1.707
	Average	8.60	2.342	8.89	1.337
	High	8.69	1.794	8.93	1.543
Staff teamwork	Low	7.70	1.927	8.83	1.000
	Average	7.73	2.375	8.94	1.461
	High	8.01	2.254	8.97	1.644
Staff support and collegiality	Low	7.89	2.444	8.75	1.390
	Average	7.90	2.323	8.91	1.531
	High	8.10	2.207	8.92	1.496
Administrative support	Low	8.09	2.112	8.52	1.126
	Average	8.16	2.423	8.79	1.550
	High	8.20	2.162	8.89	1.489

Table 4.7 shows that none of the parents' evaluations have significant p-values, while only pupils' behaviour and pupils' support and collaboration were significantly related to prosocial behaviour in teachers' evaluations. There are also some suggestions that prosocial behaviour is more likely to be found in schools where bullying is low and where pupils' participate in decisions. Staff behaviour such as participation in school activities and decisions, collaboration, support and collegiality, as well as administrative support, appears to be weak predictors of pupil prosocial behaviour.

A regression analysis of whole school variables suggests that whole school variables explain a very small portion of the variation in the prosocial score. Table 4.8 identifies pupil support and collaboration as the sole significant school predictor of prosocial behaviour.

Table 4.8: Regression analysis of whole-school variables

Prosocial scores of Year 4 students (Teacher Evaluation)		
Predictor	**F**	**P-value**
Pupils' support and collaboration	6.916	0.009

4.4 Conclusion

To identify the dominant, significant explanatory variables across clusters of individual, classroom, school, and home variables, regression analysis was again employed using the prosocial scores as the dependent variable for both teachers' and parents' evaluations. To identify the parsimonious models that include solely the dominant predictors of prosocial behaviour, a backward procedure was used.

Table 4.9 shows the results of the regression analysis that fitted students' prosocial scores provided by their teachers. This five-predictor parsimonious model explains 30.3% of the total variation in the prosocial scores. Three of the five significant predictors are individual variables mostly related to relationships and

communication; one is a home variable and the last predictor is a whole classroom variable. Pupil's relationship with peers is the best predictor of prosocial behaviour, followed by gender (female), teacher-parent communication, family structure (two parent families) and pupils' participation in the classroom.

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Table 4.9: Regression analysis of significant predictors by teachers' evaluations

Prosocial scores of Year 4 students (Teachers' Evaluation)		
Predictor	**F**	**P-value**
Teacher-reported relationship with peers	18.18	0.000
Gender	17.38	0.000
Teacher-parent communication	5.820	0.003
Family structure	4.144	0.043
Pupils' participation during lessons	3.955	0.048

The regression model that fits students' prosocial scores provided by parents identifies another five significant predictors. This five-predictor parsimonious model explains 40.4% of the total variation in the responses. Table 4.10 shows that three of these predictors are individual variables mostly related to behaviour and child's characteristics, while two are home variables. Behaviour at home is the best predictor, followed by self-efficacy, family time, family conflict and gender.

Table 4.10: Regression analysis of significant predictors by parents' evaluations

Prosocial scores of Year 4 students (Parents' evaluation)		
Predictor	**F**	**P-value**
Behaviour at home	9.817	0.000
Parent reported self- efficacy	8.308	0.000
Family time	4.422	0.013
Family conflict	4.016	0.020
Gender	4.199	0.042

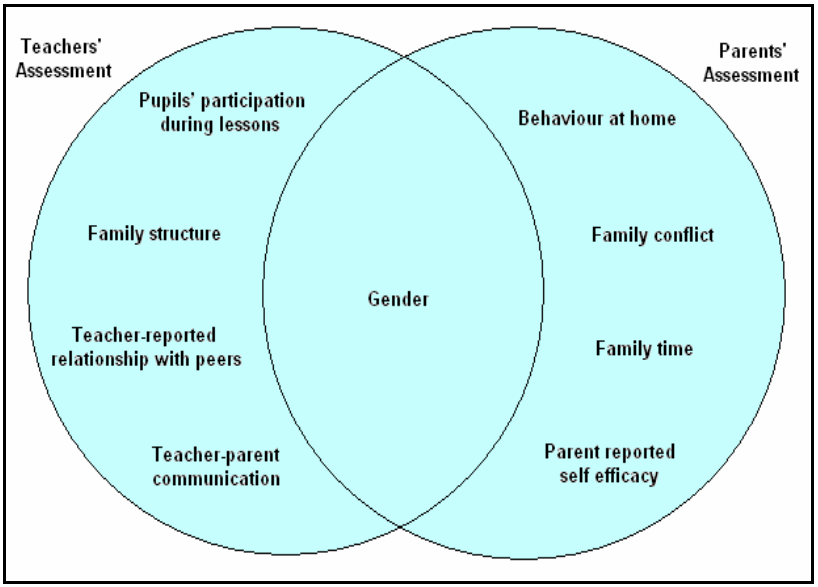

Figure 4.1: Best predictors of prosocial scores for Year 4 students on the basis of teachers' and parents' evaluations

Figure 4.1 shows that pupil's gender is the sole significant predictor common to both teachers' and parents' evaluations. None of the whole school related variables were found to contribute significantly in explaining variation in the prosocial scores when included with other individual, classroom, home and related variables. Year 4 pupils most likely to exhibit prosocial behaviour are female pupils who have good relationships with peers, high self-efficacy, have parents and teacher who communicate well together, and attend classrooms with high levels of pupils' engagement. They are well behaved at home and come from two-parent families which provide good quality time and have low levels of conflict.

Figures 4.2-4.10 provide a more visual illustration of differences in prosocial scores categorized by individual, class, school and home variables.

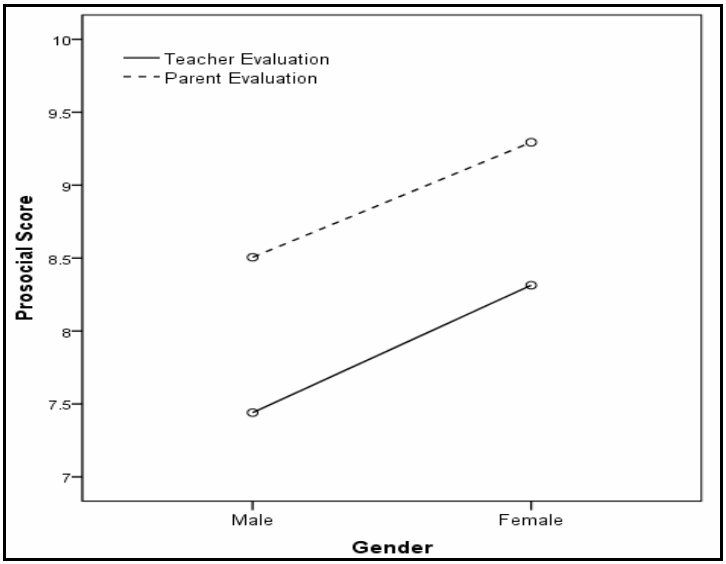

Figure 4.2: Prosocial scores by gender

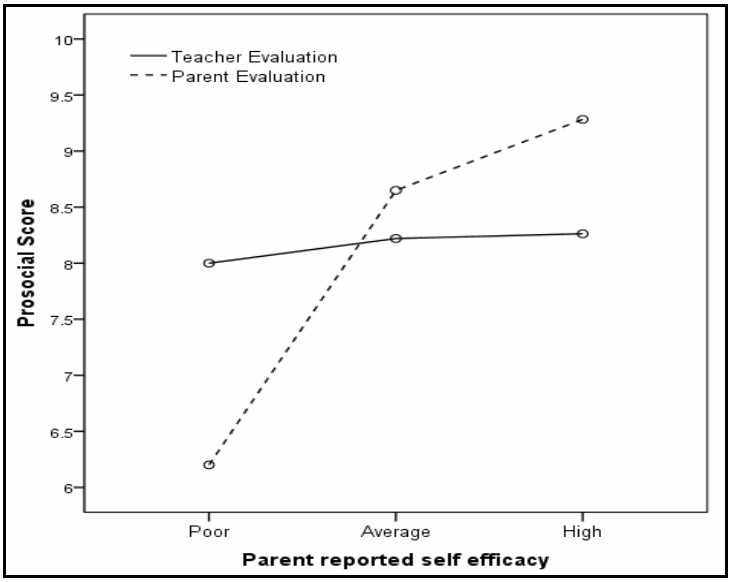

Figure 4.3: Prosocial scores by parent-reported self-efficacy

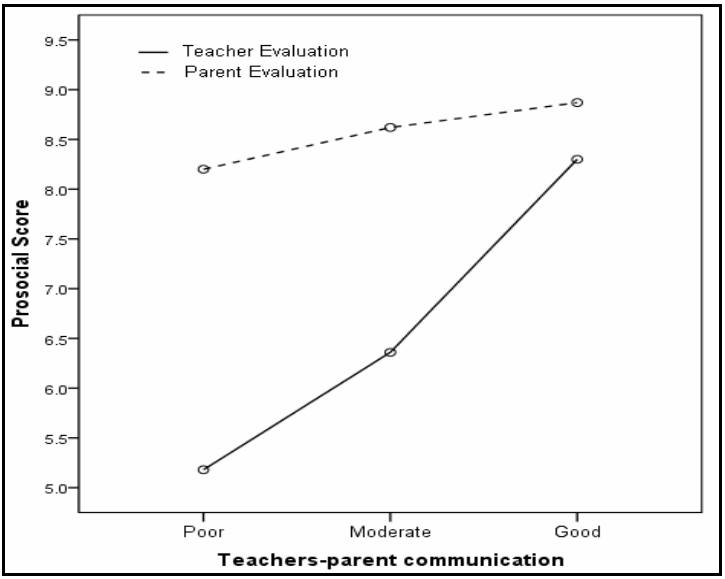

Figure 4.4: Prosocial scores by teacher-parents communication

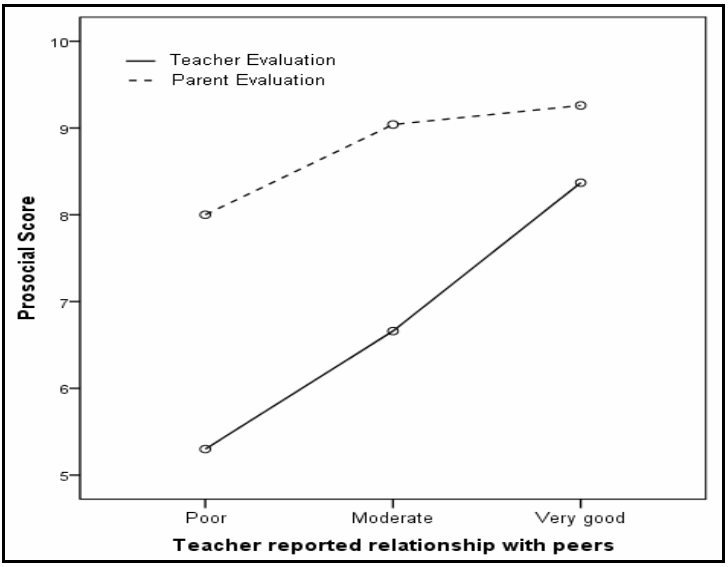

Figure 4.5: Prosocial scores by pupil relationships with peers

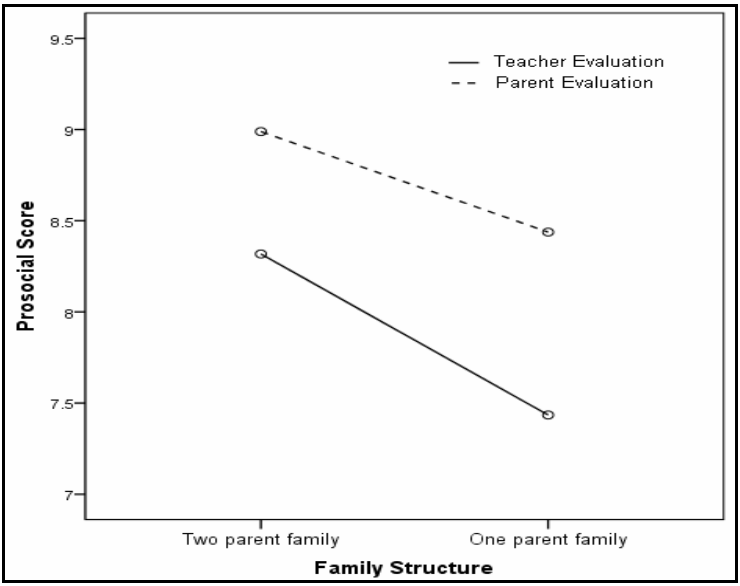

Figure 4.6: Prosocial scores by family structure

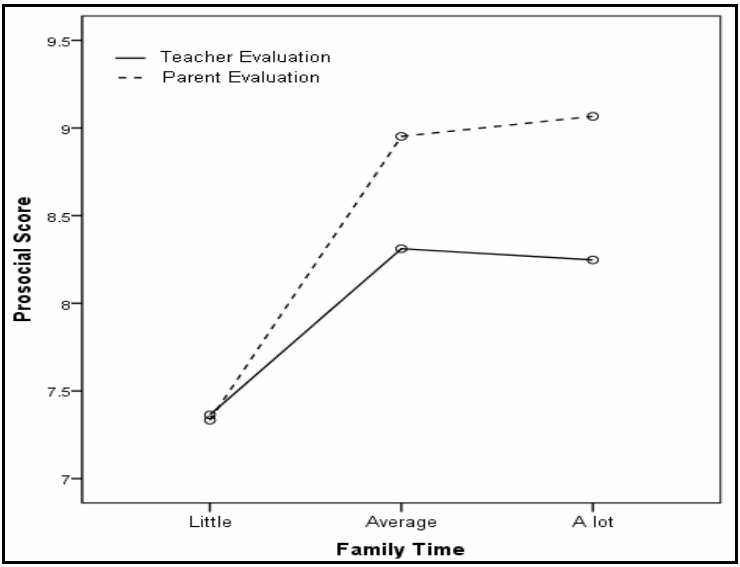

Figure 4.7: Prosocial scores by family time

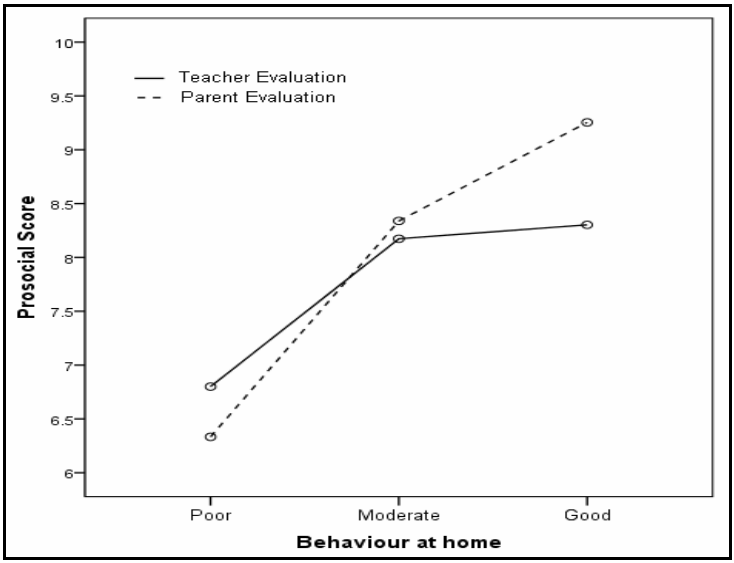

Figure 4.8: Prosocial scores by child's behaviour at home

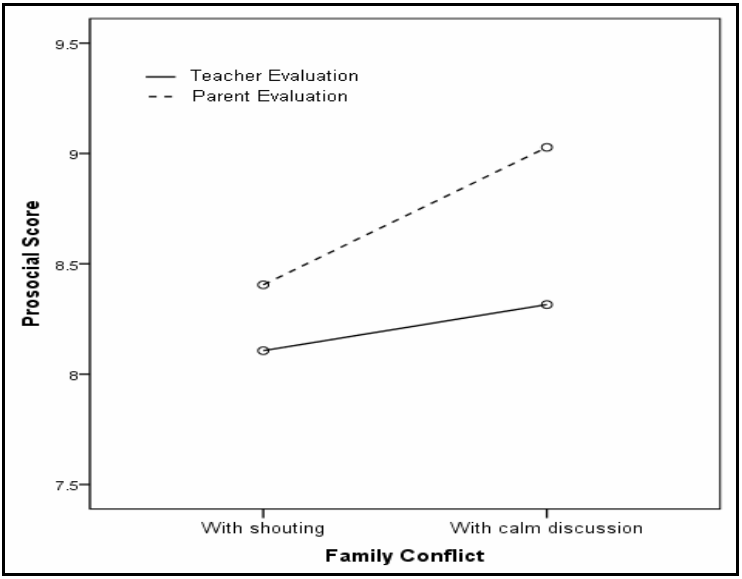

Figure 4.9: Prosocial scores by family conflict

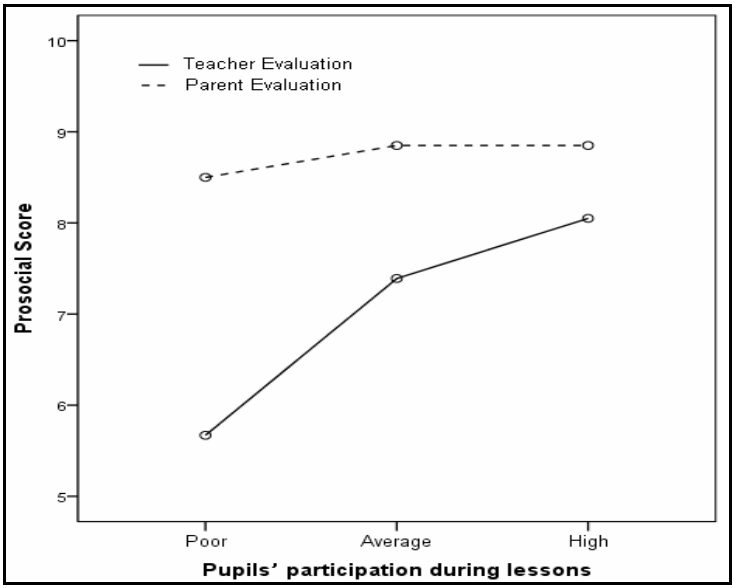

Figure 4.10: Prosocial scores by pupils' participation in lessons

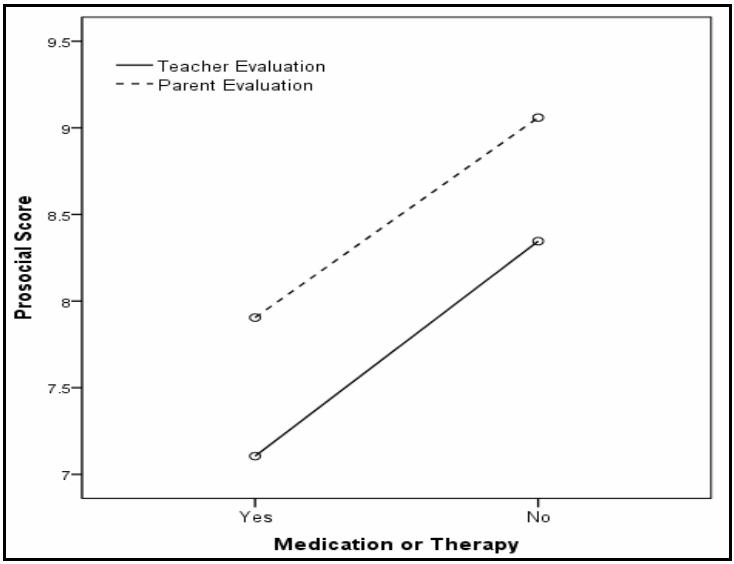

Figure 4.11: Prosocial scores by medication or therapy

Part 2

The Early to Junior Years Trajectory

5 Trajectory of SEBD from Year 1 to Year 4

One of the main objectives of this study was to identify those factors that influence the developmental trajectory of social, emotional and behaviour difficulties in primary school. Using the total difficulty scores provided by teachers and parents when pupils were in Year 1 and then again in Year 4, it was possible to identify behavioural change over time, and determine whether the pupils' difficulties improved or deteriorated over this three year period, and how that change was related to individual, school, home and community factors. In order to map this trajectory, we clustered pupils in three categories, namely those pupils whose total difficulty score increased from Year 1 to Year 4 (Increased SEBD), those whose score decreased (Reduced SEBD), and those whose score was unaltered (No change in SEBD). The last group was excluded from the analysis in this phase of the study. Table 5.1 shows the percentages of pupils in each of the three groups using both teachers' and parents' assessments. Both evaluations indicate a higher proportion of pupils with SEBD over the three-year span when compared to pupils without SEBD. Teachers identified more pupils whose SEBD increased and less pupils with decreased SEBD when compared to parents. Around 5% of pupils in teachers' evaluations and 9% in parents' evaluations displayed no change in their SEBD scores.

Table 5.1: Percentage of pupils by type of SEBD change

Group	Teachers' Evaluation	Parents' Evaluation
Reduced SEBD	39.5%	43.0%
Increased SEBD	55.6%	48.2%
No change in SEBD	4.9%	8.8%

The following sections describe how the increase or decrease in pupils' SEBD are related to the various individual, classroom, school, home and community factors explored in this study. As in the previous chapters, the variables have been categorized into three main sets, namely individual, whole class and whole school variables. The analysis makes use of univariate logistic regression to examine the association between the likelihood of a pupil's positive/negative change in SEBD and any individual, classroom, school, home and community variable. The advantage of using logistic regression analysis over the chi square, is that besides the p-value, which matches that of the chi square test using the likelihood-ratio method, it also provides estimates of the regression coefficients from which the odds ratios are computed. The odds ratio is a relative measure of hazard, indicating how much more likely a pupil will exhibit positive/negative behavioural change given the predictors. The odds ratios and their corresponding 95% confidence intervals are provided only for the significant predictors.

5.1 SEBD change by individual variables

5.1.1 Individual characteristics variables

Table 5.2 presents the percentage change in SEBD over the three year period by individual characteristics variables, making use of both teachers' and parents' evaluations. Significant percentage changes are marked bold. Table 5.3 presents the odds ratios and 95% confidence intervals computed for the significant predictors.

Table 5.2: Change in SEBD by individual characteristics variables

Individual variables (Characteristics)		Teacher evaluation		Parent evaluation	
		Less SEBD	More SEBD	Less SEBD	More SEBD
Gender	Male	**53.3%**	**40.4%**	**37.3%**	**57.0%**
	Female	**46.7%**	**59.6%**	**62.7%**	**43.0%**
Language	Maltese	92.7%	92.0%	91.7%	93.7%
	English/other	7.3%	8.0%	8.3%	6.3%
Locality	North harbour	20.4%	21.3%	30.3%	30.5%
	South harbour	12.9%	17.3%	14.6%	12.2%
	South Eastern	18.3%	18.1%	10.1%	15.9%
	Western	19.4%	15.0%	22.5%	11.0%
	Northern	17.2%	25.2%	12.4%	22.0%
	Gozo	11.8%	3.1%	10.1%	8.5%
Illness or Disability	Yes	9.4%	10.5%	12.3%	14.1%
	No	90.6%	89.5%	87.7%	85.9%
Medication or therapy	Yes	7.0%	9.5%	11.1%	13.0%
	No	93.0%	90.5%	88.9%	87.0%
Communication	Poor	**1.5%**	**7.4%**	**4.2%**	**9.8%**
	Adequate	**20.4%**	**24.5%**	**19.4%**	**25.3%**
	Very good	**78.1%**	**68.1%**	**76.4%**	**64.9%**
Teacher reported self-esteem	Low	**2.9%**	**10.5%**	**1.3%**	**5.6%**
	Average	**32.1%**	**35.6%**	**41.8%**	**25.0%**
	High	**65.0%**	**53.9%**	**57.0%**	**69.4%**
Parent reported self-esteem	Low	1.1%	4.7%	1.3%	5.6%
	Average	28.3%	31.5%	31.3%	30.0%
	High	70.7%	63.8%	67.5%	64.4%
Teacher reported self-efficacy	Low	5.1%	10.1%	**1.3%**	**6.9%**
	Average	36.5%	42.6%	**50.6%**	**31.9%**
	High	58.4%	47.3%	**48.1%**	**61.1%**
Parent reported self-efficacy	Low	2.4%	5.3%	1.2%	4.4%
	Average	44.4%	41.5%	38.3%	45.6%
	High	53.2%	53.2%	60.5%	50.0%

Poor communication skills, low self-esteem and low self-efficacy are the strongest predictors of increase in SEBD from the early to the junior primary school years. According to teachers' evaluations, the estimated odds that a pupil having poor communication displays an increase in SEBD, is 3.850 times the

estimated odds of pupils with good communication skills; according to parents' evaluations, the estimated odds ratio is 2.813. The estimated odds that a pupil with low self-esteem show an increase in their SEBD is 1.553 times the estimated odds of a pupil with high self-esteem according to teacher's evaluations, and 2.599 according to the parents' evaluations. Teachers and parents exhibit contrasting views about behaviour change by gender. According to teachers, the estimated odds that a female pupil displays an increase in SEBD is 1.682 times the estimated odds of a male, while according to parents, the estimated odds ratio is 3.222 in the reverse direction. Pupils with disability/illness and undergoing treatment/intervention are more likely to manifest increased SEBD but the associations are not significant. Language and region do not seem to predict behaviour change, though there are some indications that while pupils from the northern region tend to experience a slight increase in SEBD, those in the western and Gozo show marginal decreases.

Table 5.3: Odds ratio of significant individual characteristics variables

Predictor	Chi Square	P-value	Odds ratio	95% Conf. Int.
Teachers' Evaluation				
Communication	8.390	0.015	3.850	(2.326 – 6.371)
Gender	5.350	0.021	1.682	(1.081 – 2.616)
Self-esteem	6.705	0.035	1.553	(1.015 –2.376)
Parents' Evaluation				
Gender	6.831	0.009	3.222	(1.678 – 6.188)
Self-efficacy	7.670	0.022	2.912	(1.624 – 5.223)
Communication	6.540	0.038	2.813	(1.590 – 4.975)
Self-esteem	6.344	0.042	2.599	(1.413 – 4.781)

5.1.2 Individual classroom and school variables

Table 5.4 presents the change in SEBD by individual classroom and school variables, making use of both teachers' and parents' evaluations. Significant percentage differences are marked bold.

Table 5.4: Change in SEBD by individual classroom and school factors

Individual variables (Learning)		Teacher evaluation		Parent evaluation	
		Less SEBD	More SEBD	Less SEBD	More SEBD
Teacher reported academic progress	Poor	13.9%	18.2%	11.1%	11.5%
	Average	22.6%	30.5%	19.4%	30.8%
	Very good	63.5%	51.3%	69.4%	57.7%
Pupil reported academic progress	Poor	**1.7%**	**10.3%**	4.0%	4.8%
	Average	**47.5%**	**46.6%**	41.3%	49.4%
	Very good	**50.8%**	**43.1%**	54.7%	45.8%
Teacher academic expectation	Poor	8.8%	12.3%	5.6%	7.7%
	Moderate	26.3%	31.6%	19.4%	34.6%
	Good	65.0%	56.1%	75.0%	57.7%
Parent academic expectation	Poor	3.2%	5.5%	**1.2%**	**5.6%**
	Moderate	21.3%	27.3%	**13.6%**	**39.3%**
	Good	75.5%	67.2%	**85.2%**	**55.1%**
Learning difficulties	Many	2.5%	8.0%	2.4%	4.7%
	Some	48.3%	50.0%	50.8%	55.3%
	None	49.2%	42.0%	46.8%	40.0%
Teacher reported learning support	Yes	13.8%	12.4%	13.9%	10.1%
	No	86.2%	87.6%	86.1%	89.9%
Pupil-reported support	Not much	11.0%	15.6%	9.3%	12.2%
	Moderate	35.6%	37.6%	38.7%	36.6%
	A lot	53.4%	46.8%	52.0%	51.2%
Peer support with work	Not much	10.1%	9.9%	10.7%	14.5%
	Moderate	39.5%	43.0%	34.7%	35.4%
	A lot	50.4%	47.1%	54.7%	50.2%
Support with homework	Not much	29.5%	39.4%	27.5%	37.3%
	Moderate	36.4%	38.3%	36.3%	35.5%
	A lot	34.1%	22.3%	36.3%	27.2%
Repeating year	Yes	2.7%	3.7%	1.3%	2.8%
	No	97.3%	96.3%	98.7%	97.2%
Teacher reported engagement	Low	**12.5%**	**17.6%**	**11.1%**	**10.3%**
	Average	**33.1%**	**43.1%**	**26.4%**	**48.7%**
	High	**54.4%**	**39.4%**	**62.5%**	**41.0%**
Pupil reported engagement	Low	5.1%	10.3%	2.7%	7.2%
	Average	50.8%	41.4%	33.3%	42.2%
	High	44.1%	48.3%	64.0%	50.6%
Attendance	Regular	97.1%	94.7%	97.5%	94.2%
	Irregular	2.9%	5.3%	2.5%	5.8%

Teacher-parent communication	Poor	**0.7%**	**5.3%**	1.4%	2.5%
	Moderate	**7.4%**	**16.0%**	7.0%	10.1%
	Good	**91.9%**	**78.7%**	91.5%	87.3%
Parent-school communication	Moderate	24.0%	28.7%	**23.5%**	**37.4%**
	Good	76.0%	71.3%	**76.5%**	**62.6%**
Teacher-pupils relationship	Moderate	**5.8%**	**19.7%**	6.9%	12.7%
	Very good	**94.2%**	**80.3%**	93.1%	87.3%
Pupils-teacher relationship	Poor	3.4%	9.2%	**2.4%**	**8.0%**
	Moderate	31.4%	29.9%	**34.1%**	**17.3%**
	Very good	65.3%	60.9%	**63.4%**	**74.7%**
Teacher reported relationships with peers	Poor	**0.7%**	**6.4%**	1.4%	3.8%
	Moderate	**10.2%**	**21.9%**	16.7%	17.9%
	Very good	**89.1%**	**71.7%**	81.9%	78.2%
Pupil reported peer relationships	Poor	4.2%	9.8%	1.3%	7.2%
	Moderate	32.2%	27.6%	34.7%	27.7%
	Very good	63.6%	62.6%	64.0%	65.1%
Friends at school	Yes	**98.5%**	**93.5%**	97.5%	97.2%
	No	**1.5%**	**6.5%**	2.5%	2.8%
Close friends at school	Yes	95.4%	95.0%	97.3%	95.2%
	No	4.6%	5.0%	2.7%	4.8%
Support from close friends	Not at all	2.2%	3.1%	**0.0%**	**6.7%**
	Moderate	57.6%	52.0%	**45.6%**	**64.0%**
	A lot	40.2%	44.9%	**54.4%**	**29.2%**
Plays with peers	Not much	0.9%	3.4%	0.0%	2.4%
	Moderate	12.0%	10.9%	9.5%	15.9%
	A lot	87.2%	85.6%	90.5%	81.7%

Teachers' evaluations underline relationships and academic engagement as the key predictors of SEBD change while the strongest predictor according to the parents' evaluation is parental academic expectation. Classroom relationships, engagement and academic progress, parental expectations and communication are the strongest classroom predictors of change in SEBD. Pupils with poor relationships with teachers and peers, who are not actively engaged in the learning process and are making poor academic progress, and whose parents have low academic expectations, poor relationship with the teacher/school and provide little support, are most likely to show an increase in their SEBD over the first years of primary education.

Table 5.5: Odds ratio of individual classroom and school variables

Predictor	Chi Square	P-value	Odds ratio	95% Conf. Int.
Teachers' Evaluation				
Teacher-pupils relationship	13.96	0.000	3.951	(1.776 – 8.789)
Relationships with peers	17.63	0.000	2.666	(1.386 – 5.130)
Teacher-parent communication	12.57	0.002	2.534	(1.192 – 5.387)
Academic progress	10.17	0.006	1.962	(1.149 – 3.350)
Friends at school	5.398	0.020	1.713	(1.027 – 2.856)
Teacher reported engagement	7.260	0.027	1.637	(1.003 – 2.672)
Parents' Evaluation				
Parent academic expectation	19.10	0.000	4.481	(2.074 – 9.678)
Support from close friends	16.74	0.000	2.619	(1.379 – 4.972)
Teacher reported engagement	8.421	0.015	2.145	(1.137 – 4.047)
Pupils-teacher relationship	7.546	0.023	1.898	(1.020 – 3.534)
Parent-school communication	3.932	0.047	1.761	(1.100 – 2.819)

Table 5.5 presents the odds ratio computed for significant predictors by both teachers' and parents' evaluations.

- Pupils who have a poor relationship with their teacher are 3.951 times more likely to have SEBD than pupils who have good relationships; according to parents, the odds ratio is 1.898 times;
- Pupils who have poor relationships with their peers are 2.666 times more likely to have SEBD than peers who have hood relationships;
- Pupils whose teacher and parent do not enjoy a good relationship are 2.534 times more likely to have SEBD than peers whose teachers and parents work well together; according to parents the odds ratio is 1.761 times;
- Pupils with poor academic progress are 1.962 times more likely to have difficulties over time than pupils with good academic progress;
- Pupils who have no friends are 1.713 times more likely to have SEBD than peers who have friends;
- Pupils whose parents have low academic expectations for their children are 4.481 times more likely to develop SEBD than peers with parents who hold high expectations;

- Pupils who are not actively engaged in the learning process are 1.637 times more likely to display difficulties compared to children with high engagement; according to parents the odds ratio is 2.145 times.
- Pupils who have no support from friends are 2.619 times more likely to have difficulties over time than supported peers.

5.1.3 Individual home and community variables

Table 5.6 presents the change in SEBD over the three year period by individual home and community variables, making use of both teachers' and parents' evaluations. Percentage differences that are significant are marked bold.

Table 5.6: Change in SEBD by individual home and community factors

Individual variables (Home and Community)		Teacher evaluation		Parent evaluation	
		Less SEBD	More SEBD	Less SEBD	More SEBD
Family Structure	Two parent	**90.1%**	**80.2%**	**92.8%**	**83.3%**
	One parent	**9.9%**	**19.8%**	**7.2%**	**16.7%**
Family Size	1 child	20.0%	20.8%	16.9%	18.3%
	2 children	50.8%	45.8%	51.8%	49.5%
	3 children	17.7%	22.9%	21.7%	22.6%
	4 or more	11.5%	10.4%	9.6%	9.7%
Father Occupation	Professional	32.5%	30.5%	35.6%	25.6%
	Technical	26.5%	19.1%	23.3%	22.6%
	Skilled/Unskilled	37.3%	43.6%	38.4%	41.8%
	State income	3.6%	6.8%	2.7%	10.0%
Mother Occupation	Professional	17.5%	24.7%	19.2%	22.9%
	Technical	8.3%	7.9%	10.3%	13.3%
	Skilled/Unskilled	7.5%	6.7%	3.8%	12.0%
	House carer	66.7%	60.7%	66.7%	51.8%
Father Education	Primary	3.4%	6.3%	3.1%	5.7%
	Secondary	51.7%	55.5%	42.3%	55.3%
	Post secondary	25.8%	24.0%	26.4%	26.1%
	Tertiary	19.1%	14.2%	28.2%	12.9%

Mother Education	Primary	1.6%	4.1%	3.8%	5.2%
	Secondary	58.1%	62.5%	56.6%	58.7%
	Post secondary	22.5%	17.7%	20.3%	20.9%
	Tertiary	17.8%	15.7%	19.3%	15.2%
Family Income	Less 150 Euro	7.9%	8.5%	**3.6%**	**12.0%**
	150 – 300 Euro	56.2%	64.1%	**54.2%**	**56.3%**
	Over 300 Euro	36.0%	27.4%	**42.2%**	**31.6%**
Family Time	Little	4.6%	5.4%	**1.3%**	**8.7%**
	Average	50.0%	53.8%	**51.3%**	**51.1%**
	A lot	45.4%	40.9%	**47.4%**	**40.2%**
Behaviour at home	Poor	1.1%	3.1%	**0.0%**	**3.3%**
	Moderate	32.6%	33.1%	**20.0%**	**41.8%**
	Good	66.3%	63.8%	**80.0%**	**54.9%**
Communication with parents	Poor	1.1%	2.3%	**1.3%**	**5.2%**
	Moderate	13.0%	18.8%	**10.0%**	**20.6%**
	Good	85.9%	78.9%	**88.8%**	**74.2%**
Relationship with siblings	Poor	1.3%	2.0%	1.5%	6.7%
	Moderate	20.0%	27.5%	26.9%	29.3%
	Good	78.7%	70.6%	71.6%	64.0%
Relationship with relatives	Moderate	4.3%	10.2%	**5.0%**	**15.5%**
	Good	95.7%	89.8%	**95.0%**	**84.5%**
Parent reported Friends	Yes	97.8%	90.7%	98.8%	95.6%
	No	2.2%	9.3%	1.3%	4.4%
Membership in organizations	Yes	77.6%	75.9%	87.0%	80.7%
	No	22.4%	24.1%	13.0%	19.3%
Participation in organizations	Poor	**3.7%**	**12.2%**	**2.7%**	**10.5%**
	Moderate	**13.9%**	**7.3%**	**8.1%**	**18.4%**
	Good	**82.4%**	**80.5%**	**89.2%**	**71.1%**
Family Cohesion	Little	2.2%	8.8%	1.2%	7.2%
	Average	16.1%	20.8%	17.3%	20.0%
	A lot	81.7%	70.4%	81.5%	72.8%
Family Conflict	With shouting	19.6%	20.3%	**19.0%**	**29.7%**
	Calm discussion	80.4%	78.1%	**81.0%**	**70.3%**
Parenting Stress	Very stressed	**15.2%**	**27.3%**	**17.3%**	**31.2%**
	Moderate stress	**67.8%**	**67.7%**	**60.5%**	**60.2%**
	Not stressed	**17.0%**	**5.0%**	**22.2%**	**8.6%**
Parenting Difficulty	Very difficult	53.8%	58.1%	59.5%	64.5%
	Slightly difficult	39.9%	38.0%	35.4%	33.2%
	Not difficult	6.3%	3.9%	5.1%	2.3%
Parenting quality time	Moderate	16.9%	23.9%	**18.8%**	**29.4%**
	A lot	83.1%	76.1%	**81.3%**	**70.6%**

Parenting supervision	Moderate	**22.3%**	**32.3%**	**20.5%**	**31.0%**
	A lot	**77.7%**	**67.7%**	**79.5%**	**69.0%**
Parenting Strategies	Discipline	23.5%	28.2%	14.0%	25.8%
	Punishment	8.5%	14.0%	8.2%	13.2%
	Rewards	25.5%	24.2%	25.5%	20.9%
	Persuasion	22.9%	19.1%	25.5%	19.8%
	Discussion	19.6%	14.5%	26.8%	20.3%
Neighbourhood Safety	Not safe	8.5%	8.5%	6.2%	14.0%
	Moderately safe	56.2%	62.8%	59.3%	60.2%
	Very safe	35.4%	28.7%	34.6%	25.8%
Neighbourhood Support	Not helpful	24.6%	25.7%	26.6%	28.3%
	Slightly helpful	49.2%	49.6%	45.0%	52.2%
	Very helpful	26.2%	23.7%	28.4%	19.6%

Family structure appears to be the strongest predictor of the development of SEBD in primary school, followed by parenting stress and supervision, participation in local organisations and family dynamics. On the other hand, socio-economic status features as a relatively weaker predictor, even if family income is a significant predictor according to parents' evaluations. According to teachers' and parents' evaluations, the odds that a child living in a single parent family will have more difficulties over time are more than three times the odds for a child living in a two-parent family. Both the parents' and teachers' evaluations indicate that parenting stress and lack of supervision at home, as well as non-participation of children in local organisations, are strong predictors of SEBD development. They also suggest that a child's behaviour is set to deteriorate when parents use punishment as their main disciplinary measure; the proportion of children displaying improved behavioural change is larger when reward, discussion and gentle persuasion are used; these differences however, are not significant.

The parents' evaluations underline parenting and family dynamics as key predictors of SEBD. Children from single-parent, poor families with little family time, high family conflict and low family cohesion, with high parenting stress, poor supervision and lack of quality time, and with poor relationships with parents, relatives and siblings, are at the greatest risk of developing SEBD.

On the other hand, neighbourhood safety and support did not feature as predictors of SEBD. Poor family income is a significant risk factor of behaviour change, but parental education and occupation were not found to be significant (though poor parental education and occupation are indicative of an increase in SEBD). Children coming from poor families are almost twice as likely to experience an increase in SEBD when compared to children from richer families.

Table 5.7: Odds ratio of significant individual home and community variables

Teachers' Evaluation				
Predictor	**Chi Square**	**P-value**	**Odds ratio**	**95% Conf. Int.**
Family Structure	9.549	0.002	4.170	(2.294 – 7.582)
Parenting Stress	8.035	0.018	3.370	(1.658 - 6.851)
Parenting supervision	4.495	0.034	2.916	(1.560 – 5.448)
Participation in organizations	6.498	0.039	2.281	(1.339 - 3.889)
Parents' Evaluation				
Behaviour at home	13.82	0.001	3.673	(1.985 – 6.797)
Family Structure	8.807	0.003	3.397	(1.793 – 6.436)
Parenting Stress	8.846	0.012	2.683	(1.514 – 4.756)
Participation in organizations	8.270	0.016	2.517	(1.384 – 4.576)
Communication with parents	7.459	0.024	2.217	(1.278 – 3.845)
Parenting supervision	4.768	0.029	1.936	(1.186 – 3.161)
Family Conflict	4.445	0.035	1.828	(1.218 – 2.742)
Family Income	6.648	0.036	1.799	(1.139 – 2.839)
Family Time	6.340	0.042	1.650	(1.049 – 2.595)
Parenting quality time	4.095	0.043	1.587	(1.013 – 2.486)
Relationship with relatives	4.057	0.044	1.519	(1.040 – 2.297)

Table 5.7 presents the odds ratio and corresponding 95% confidence intervals computed for the significant predictors by both teachers' and parents' evaluations.

- The odds that a child living in a single parent family is more likely to have more difficulties over time are 4.170 and 3.397 times respectively the estimated odds for a child living in a two-parent family structure;

- The odds that a child living in a family with high levels of parenting stress will have more difficulties over time are 3.370 and 2.683 times respectively the odds for a child experiencing low levels of parenting stress;
- A child with poor parenting supervision is 2.916 and 1.936 times respectively more likely to experience SEBD than well supervised children;
- A child not participating in local organisations is 2.281 and 2.517 times respectively more likely to develop SEBD than more active peers.
- The odds that a child who misbehaves at home displays an increase in difficulties are 3.673 times the estimated odds for a child who is well behaved;
- A child who has poor communication with parents is 2.217 times more likely to exhibit a deterioration in behaviour over time compared to peers having good communication with their parents;
- A child living in a family with violent conflicts is 1.828 more likely to develop SEBD than those in families employing more constructive conflict management;
- A child coming from a family with low income is 1.799 times more likely to experience an increase in SEBD when compared to children from more affluent families;
- A child coming from a family which provides little family time is 1.650 times more likely to develop SEBD than those living in families which provide quality time;
- A child who has a poor relationship with relatives is 1.519 more likely to experience SEBD than children enjoying good relationships.

5.2 Whole classroom variables

Table 5.8 presents the change in SEBD over the three year period by whole classroom variables. Percentage differences that are significant are marked in bold. Table 5.9 presents the odds ratio and

corresponding 95% confidence intervals computed for the significant predictors.

Table 5.8: Change in SEBD by whole classroom variables

Classroom variables		Teacher evaluation		Parent evaluation	
		Less SEBD	More SEBD	Less SEBD	More SEBD
Pupils' participation in lessons	Poor	**0.0%**	**4.7%**	**0.0%**	**5.6%**
	Moderate	**13.4%**	**18.2%**	**17.4%**	**17.9%**
	Good	**86.6%**	**77.1%**	**82.6%**	**76.5%**
Pupils' involvement in decisions	Poor	6.7%	8.8%	4.3%	6.4%
	Moderate	53.7%	53.8%	50.9%	50.7%
	Good	39.6%	37.4%	44.8%	42.9%
Pupils' collaboration in learning	Poor	2.0%	1.5%	1.0%	0.0%
	Moderate	29.1%	31.9%	30.4%	33.8%
	Good	68.9%	66.6%	68.6%	66.2%
Pupils' behaviour during play	Poor	1.6%	3.0%	0.0%	1.4%
	Moderate	40.3%	39.6%	48.7%	53.6%
	Good	58.1%	57.4%	51.3%	44.9%
Pupils' sense of classroom community	Poor	**0.0%**	**4.1%**	0.0%	2.3%
	Moderate	**3.0%**	**7.1%**	6.5%	7.4%
	Good	**97.0%**	**88.8%**	93.5%	92.6%
Classroom resources	Not adequate	**10.5%**	**17.6%**	**10.3%**	**13.0%**
	Adequate	**76.7%**	**72.9%**	**67.9%**	**79.7%**
	Very adequate	**12.8%**	**9.5%**	**21.8%**	**7.2%**
Teachers' training	Adequate	54.9%	58.2%	55.8%	58.0%
	Very good	45.1%	41.8%	44.2%	42.0%

Table 5.9: Odds ratio of significant whole classroom variables

Teachers' Evaluation				
Predictor	**Chi Square**	**P-value**	**Odds ratio**	**95% Conf. Int.**
Participation during lessons	6.822	0.033	2.948	(1.709 – 5.083)
Sense of classroom community	6.540	0.038	2.504	(1.413 – 4.439)
Classroom resources	6.115	0.047	1.685	(1.037 – 2.740)
Parents' Evaluation				
Participation during lessons	6.884	0.032	2.123	(1.088 – 4.143)
Classroom resources	6.438	0.040	1.842	(1.210 – 3.323)

Pupils' participation in classroom activities is the strongest whole classroom predictor of SEBD from the early to the junior years. According to teachers' and parents' evaluations, the odds that a pupil attending a classroom characterized by lack of pupils' participation will have more SEBD are 2.948 and 2.123 times respectively the odds for a pupil attending a classroom with active pupils' participation. This is followed by pupils' sense of classroom community: the odds that a pupil attending a classroom where pupils have a weak sense of community will have more difficulties over time are 2.504 times the odds for a pupil attending a classroom with strong sense of community. Lack of classroom resources is another predictor of SEBD development. Teacher training, pupils' involvement in decision making, pupils' collaboration, and pupils' behaviour during play did not feature as significant predictors. There are some indications, however, that classrooms marked by lack of pupils' involvement in decision making, low levels of pupils' collaboration and misbehavior during play tend to increase the possibility of pupils developing SEBD in the early years.

5.3 Whole school variables

Table 5.10 presents the change in SEBD over the three year period by whole school variables. Significant percentage differences are marked bold. Table 5.11 presents the odds ratios and corresponding 95% confidence intervals computed for the significant predictors by both teachers' and parents' evaluations.

The data suggests that the strongest whole school predictors for the development of SEBD are related to pupils' rather than to staff's behaviour. Bullying at school is the strongest whole-school predictor: according to teachers' and parents' evaluations, the odds that a pupil attending a school characterized by bullying will have more SEBD are 3.068 and 3.673 times respectively the odds for a pupil attending a school with a low level of bullying. This is followed by pupils' poor behaviour at the whole school level: the

odds that a pupil attending a school with high levels of pupil misbehaviour will have more difficulties over time are 2.552 and 2.319 times respectively the odds for a pupil attending a school with good pupil behaviour.

Table 5.10: Change in SEBD by whole school variables

School variables		Teacher evaluation		Parent evaluation	
		Less SEBD	More SEBD	Less SEBD	More SEBD
Pupils' behaviour at school	Average	**35.4%**	**47.5%**	**37.7%**	**51.3%**
	Good	**64.6%**	**52.5%**	**62.3%**	**48.7%**
Support and collaboration	Average	**59.0%**	**70.1%**	61.5%	72.5%
	Good	**41.0%**	**29.9%**	38.5%	27.5%
Engagement in school activities	Average	30.6%	39.5%	43.1%	52.3%
	Good	69.4%	60.5%	56.9%	47.7%
Pupils' participation in decisions	Poor	40.3%	47.0%	42.3%	49.3%
	Average	54.5%	47.5%	48.7%	46.4%
	Good	5.2%	5.5%	9.0%	4.3%
Bullying	A lot	**3.8%**	**14.2%**	**8.7%**	**14.8%**
	Occasional	**43.6%**	**44.8%**	**36.2%**	**50.1%**
	Rarely	**52.6%**	**41.0%**	**55.1%**	**35.1%**
Staff participation in school activities	Low	1.1%	3.7%	1.3%	1.4%
	Average	44.3%	48.5%	42.3%	49.3%
	High	54.6%	47.8%	56.4%	49.3%
Staff participation in decisions	Low	28.4%	37.2%	37.2%	40.6%
	Average	59.0%	51.9%	51.3%	49.3%
	High	12.7%	10.9%	11.5%	10.1%
Staff teamwork	Low	11.5%	14.2%	**6.4%**	**17.4%**
	Average	46.4%	52.2%	**44.9%**	**50.7%**
	High	42.1%	33.6%	**48.7%**	**31.9%**
Staff support and collegiality	Low	10.9%	12.7%	7.7%	14.5%
	Average	43.7%	49.3%	43.6%	50.7%
	High	45.4%	38.1%	48.7%	34.8%
Administrative support	Low	6.0%	7.1%	2.6%	8.7%
	Average	44.0%	48.6%	43.6%	43.5%
	High	50.0%	44.3%	53.8%	47.8%

Table 5.11: Odds ratio of significant whole school variables

Predictor	Chi Square	P-value	Odds ratio	95% Conf. Int.
Teachers' Evaluation				
Bullying	9.020	0.011	3.068	(1.783 – 5.280)
Pupils' behaviour at school	5.596	0.018	2.552	(1.415 – 4.604)
Support and collaboration	4.891	0.027	2.036	(1.238 – 3.350)
Parents' Evaluation				
Bullying	12.43	0.002	3.673	(2.111 – 6.402)
Pupils' behaviour at school	4.891	0.027	2.319	(1.231 – 4.367)
Staff teamwork	6.763	0.034	1.948	(1.157 – 3.282)

Lack of pupils' support and collaboration at the whole school is another strong predictor according to teachers' evaluations: pupils attending schools with low levels of pupil support and collaboration are 2.036 times more likely to have increased difficulties than pupils attending schools with high levels of pupil support and collaboration. Pupils' poor engagement in school activities also appears to be associated with SEBD development. On the other hand, parents underline the lack of staff teamwork as another predictor of SEBD: the odds that a pupil attending a school with poor staff teamwork will have more difficulties over time are 1.948 times the estimated odds for a pupil attending a school with a collaborative staff. Other staff behaviours such as participation in school activities and decision making, and staff and administrative support did not feature as significant predictors of SEBD change.

5.4 Multivariate Logistic Regression Analysis

To identify the dominant factors that predict the likelihood of a pupil displaying a change in social, emotional and behaviour difficulties over time, a multivariate logistic regression analysis was carried out for teachers' and parents' evaluations respectively, using solely the explanatory variables that were found to be significant in the univariate analysis.

Table 5.12: Multivariate logistic regression of all variables by teachers' evaluations

Teachers' Evaluation				
Predictor	**Chi square**	**P-value**	**Odds ratio**	**95% Conf. Int.**
Bullying	9.657	0.008	3.562	(1.883 – 6.733)
Communication skills	9.020	0.011	3.211	(1.727 – 5.962)
Teacher-pupils relationship	5.502	0.019	2.856	(1.620 – 5.030)
Family structure	5.168	0.023	2.695	(1.488 – 4.879)
Gender	4.768	0.029	2.451	(1.418 – 4.233)
Relationship with peers	6.763	0.034	2.110	(1.132 – 3.936)
Pupil has friends at school	4.397	0.036	2.069	(1.209 – 3.540)
Pupils' behaviour at school	4.261	0.039	1.963	(1.094 – 3.519)
Pupils' participation in lessons	6.340	0.042	1.852	(1.032 – 3.320)
Parenting stress	6.293	0.043	1.803	(1.010 – 2.953)
Teacher reported self-esteem	6.247	0.044	1.762	(1.083 – 2.864)
Teacher-parent communication	6.202	0.045	1.639	(1.002 – 2.680)
Pupils' academic progress	6.115	0.047	1.520	(1.005 – 2.299)
Participation in organizations	6.073	0.048	1.486	(1.004 – 2.199)

The multiple logistic regression model using teachers' evaluations identified fourteen dominant predictors This fourteen-predictor parsimonious model explains 55.1% of the total variation in the responses. Table 5.12 show that eight of these predictors are individual variables mostly related to behaviour, relationships and learning; three are home and community variables, two are whole school variables and the last predictor is a whole classroom variable. According to teachers, the best predictor that identifies changes in the pupil's behaviour difficulties over time is bullying at school. This is followed by the pupil's communication skills, relationship with the teacher, family structure, and gender. The pupils most at risk for developing SEBD would thus be female pupils attending schools where bullying and misbehavior are prevalent, who have poor communication skills, poor relationship with the teacher and peers, and have few friends. They come from single parent families and have parents who are highly stressed. They are also likely to be pupils with poor self-esteem and self-efficacy, experiencing difficulties in their academic difficulties, with poor teacher-parent

communication and attending classrooms with poor pupils' participation. They do not participate in local organisations.

Table 5.13: Multivariate logistic regression of all variables by parents' evaluations

Parents' Evaluation				
Predictor	**Chi square**	**P-value**	**Odds ratio**	**95% Conf. Int.**
Gender	7.879	0.005	3.986	(2.039 – 7.794)
Bullying	9.421	0.009	3.648	(1.833 – 7.257)
Behaviour at home	8.857	0.012	3.351	(1.789 – 6.273)
Parent academic expectation	8.270	0.016	3.029	(1.689 – 5.431)
Support from close friends	7.927	0.019	2.945	(1.601 – 5.417)
Family structure	5.168	0.023	2.846	(1.628 – 4.976)
Parenting stress	7.459	0.024	2.761	(1.534 - 4.973)
Pupils' participation in lessons	7.224	0.027	2.598	(1.455 – 4.642)
Teacher-reported self-efficacy	6.763	0.034	2.234	(1.205 – 4.143)
Teacher-reported engagement	6.705	0.035	2.169	(1.245 – 3.776)
Communication skills	6.540	0.038	1.963	(1.140 – 3.377)
Pupil-teacher relationship	6.438	0.040	1.789	(1.022 – 3.135)
Participation in organisations	6.340	0.042	1.726	(1.017 – 2.931)
Communication with parents	6.202	0.045	1.684	(1.017 – 2.786)
Parenting supervision	3.875	0.049	1.570	(1.000 – 2.464)

The multivariate logistic regression model using parents' evaluations identifies fifteen dominant predictors. This fifteen-predictor parsimonious model explains 62.1% of the total variation in the responses. Table 5.13 shows that seven of these predictors are individual variables mostly related to behaviour, relationships and learning; six are home and community variables; one is a whole classroom variable and another a whole school variable. The best discriminant predictor is gender, followed by bullying, child's behaviour at home, parental academic expectations, child support from close friends, family structure and parenting. The pupils most at risk for developing SEBD would thus be male pupils attending schools where bullying is prevalent, who manifest behaviour difficulties at home, with low parental academic expectations and little support from close friends. They are pupils coming from single-parent families with high levels of parental stress and low

levels of parental supervision. They have low self-efficacy, poor engagement in academic activities, poor communication skills, and poor relationship with the teacher and with the parents. They do not participate in local organisations.

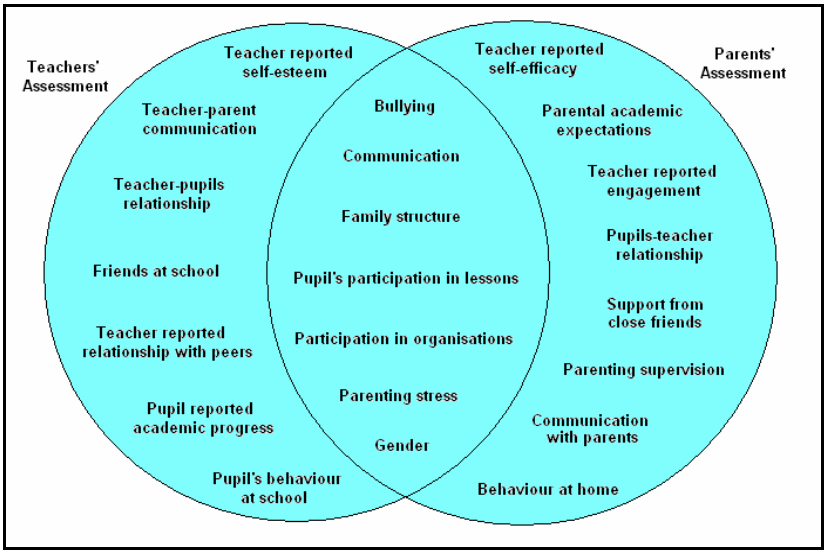

Figure 5.1: Best predictors of SEBD change by teachers' and parents' evaluations

Figure 5.1 shows that gender, bullying at school, family structure, communication skills, pupils' participation in lessons, parenting stress and participation in organisations are significant predictors of behaviour change in both teachers' and parents' evaluations. Teachers' evaluations underline key factors related to the life of the pupil at school, primarily bullying and misbehavior, poor relationships with teachers and peers, poor communication skills, and the classroom group lack of participation in lessons. Family structure features as another top predictor, followed by parenting stress as the other family-related predictor. While teachers' evaluations suggest that females are more likely to register an increase in SEBD, parents' evaluations suggest the opposite trend.

Indeed gender is the strongest predictor in the parents' evaluations. Parents' evaluations suggest a balance of individual, school and home factors in explaining the change in SEBD. School bullying features as another very strong predictor, followed by the child's behaviour at home and parents' own academic expectations for their offspring. Family structure and parenting stress are two other strong predictors, reflecting the findings in the teachers' evaluations; these are followed by a number of individual characteristic, classroom and home predictors. Considering the ranking, odds ratio, and teachers' and parents' evaluations, it would seem that the strongest predictors for SEBD development in primary school are bullying at school, gender, pupil's communication skills, family structure, parenting stress, behaviour at home, parental expectation, teacher-pupil relationship and peer relationships.

A longitudinal increase in SEBD is more likely to occur if a pupil has poor communication, poor self-esteem and self-efficacy, poor relationships with teacher and peers, has few friends, is not engaged in classroom activities and is making poor academic progress. The home-school communication is poor and parental academic expectations are low. The pupil comes from a single parent family, with high levels of parenting stress, lack of supervision and family time, and high conflict. His or her behaviour at home is poor and s/he has poor communication with parents and relatives. The student does not participate in local organisations. S/he attends a classroom with lack of pupil participation, lack of resources and poor sense of community, and a school characterized by high level of pupil bullying and misbehaviour and poor staff collaboration and collegiality.

Figures 5.3 to 5.24 exhibit the associations between the likelihood of a pupil's positive/negative change in social, emotional and behaviour difficulties and the significant individual, classroom, school, home and community variables that were identified by the Logistic regression models.

5.5 The cumulative effect of risk factors

The study also examined the cumulative effect of the various risk predictors identified above on the pupils' well-being and mental health. For each pupil, the number of risk factors was counted from the list of significant predictors and pupils were then grouped into categories according to the numbers of risk factors they were exposed to. Gender was excluded since teachers' and parents' evaluations suggested opposite trends. For all the other risk factors, teachers and parents shared similar views about which categories of individual, classroom, school, home and community-related factors predicted an increase in SEBD. In 33.3% of the sample, no risk factor was present, one risk factor was present in 30.7% of the participants, two risk factors in 20.7%, three in 9.3%, four in 3.3% and five in 2.7%.

In order to predict the pupil's likelihood of mental health difficulties on the basis of the number of risk factors, the information provided by the teacher- and parent-reported SDQ total difficulties and impact scores was combined by means of an algorithm developed by Goodman and colleagues (Goodman et al. 2000). The algorithm generates three ordinal categories (unlikely, possible and probable) for the risk of mental health difficulties in children.

Table 5.14 and Figure 2 show the percentage of pupils within each level of mental health problems, grouped by the number of risk factors present. It is evident that the percentage of possible and probable mental health problems rises steadily with every additional risk factor ($\chi^2 = 25.05,\ df = 10,\ p = 0.005$). The percentage of pupils showing at least signs of mental health problems (possible and probable outcome in the SDQ algorithm) is 12.0% in the group without any risk factors, increasing to 17.4% when one risk factor is present and 32.2% for two risk factors. The risk of mental health difficulty continues to increase significantly once pupils are exposed to more than two risk factors, ranging from 50% for pupils with 3 risk factors to 75% for those with 5 risk factors. This means that

36% of young primary school pupils have at least 32% chance of experiencing mental health difficulties, while 15% of pupils have at least 50% chance. 6% and 3% of pupils are at very high risk with 60% and 75% chance of experiencing mental health problems respectively.

Table 5.14: Likelihood of mental health difficulties by number of risk factors

		Mental Health Problem		
		Unlikely	Possible	Probable
Number of risk factors	0	88.0%	10.0%	2.0%
	1	82.6%	10.9%	6.5%
	2	67.8%	16.1%	16.1%
	3	50.0%	21.4%	28.6%
	4	40.0%	20.0%	40.0%
	5	25.0%	25.0%	50.0%

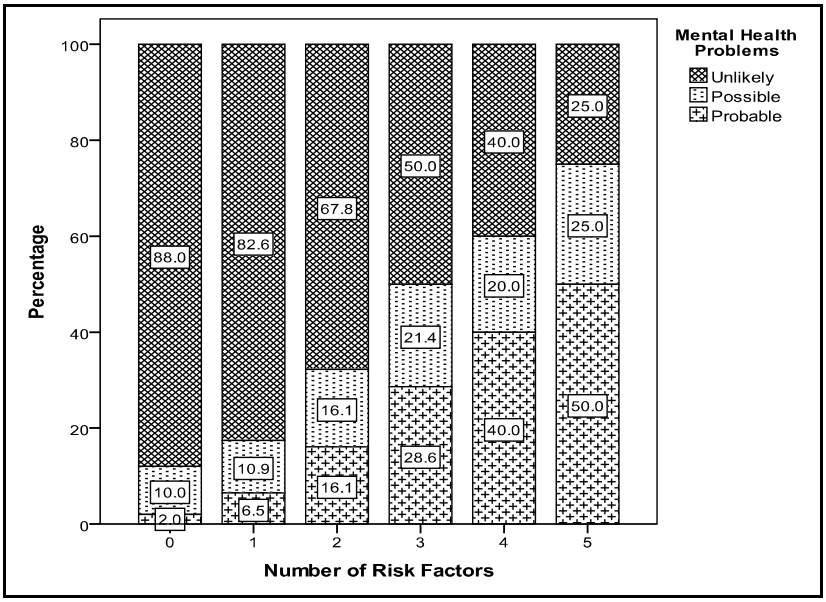

Figure 5.2: Likelihood of mental health difficulties by risk factors

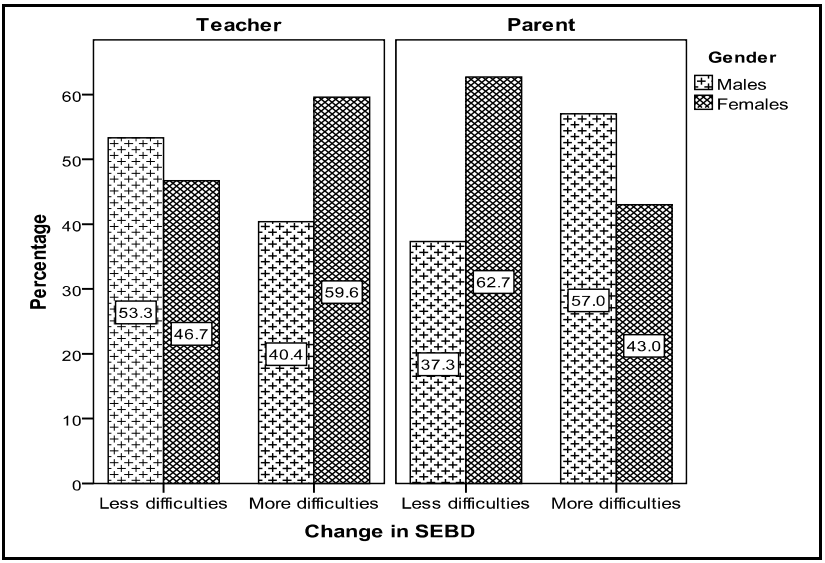

Figure 5.3: Change in SEBD by gender

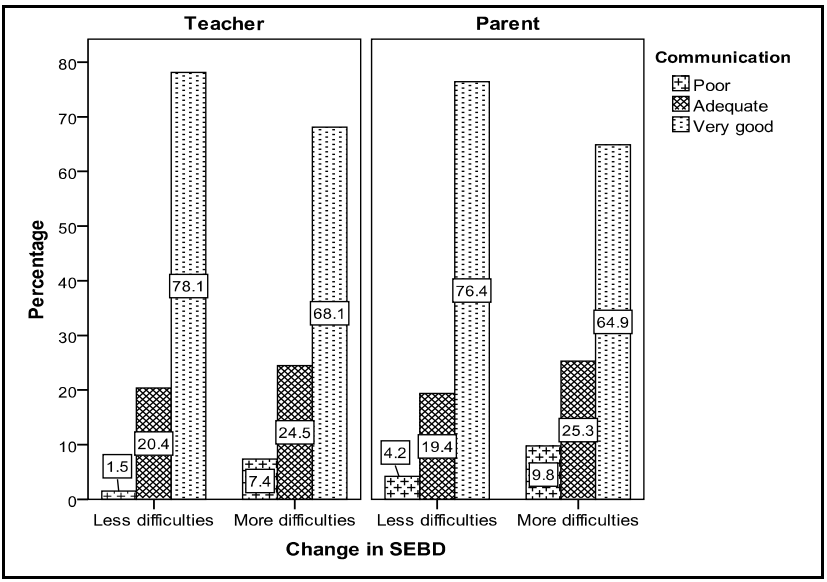

Figure 5.4: Change in SEBD by pupil communication

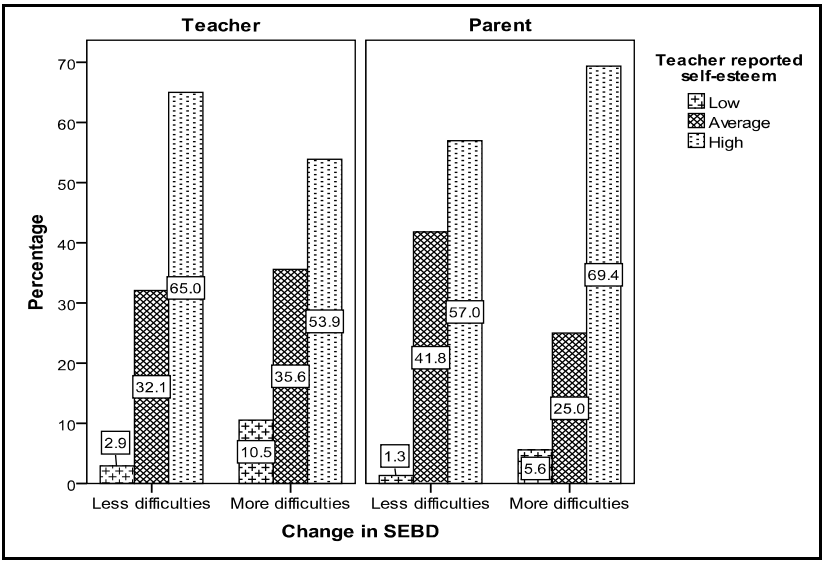

Figure 5.5: Change in SEBD by teacher-reported self-esteem

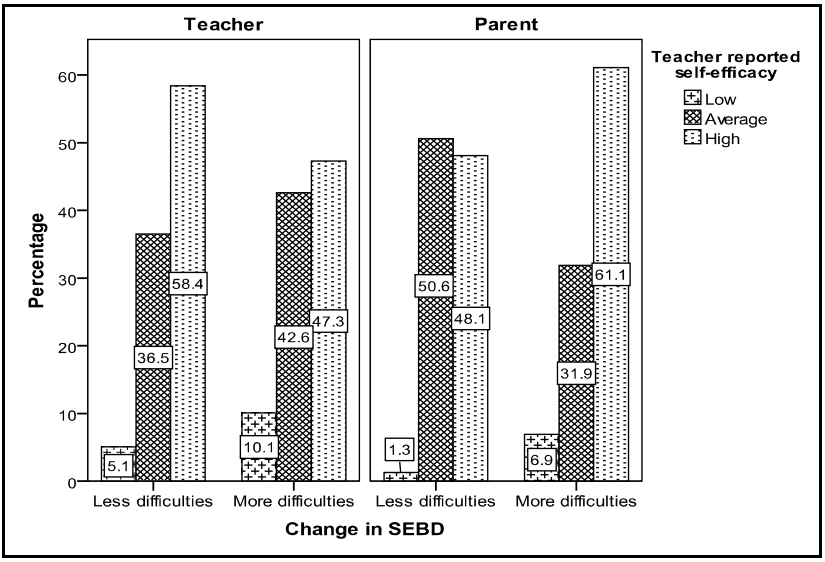

Figure 5.6: Change in SEBD by teacher reported self efficacy

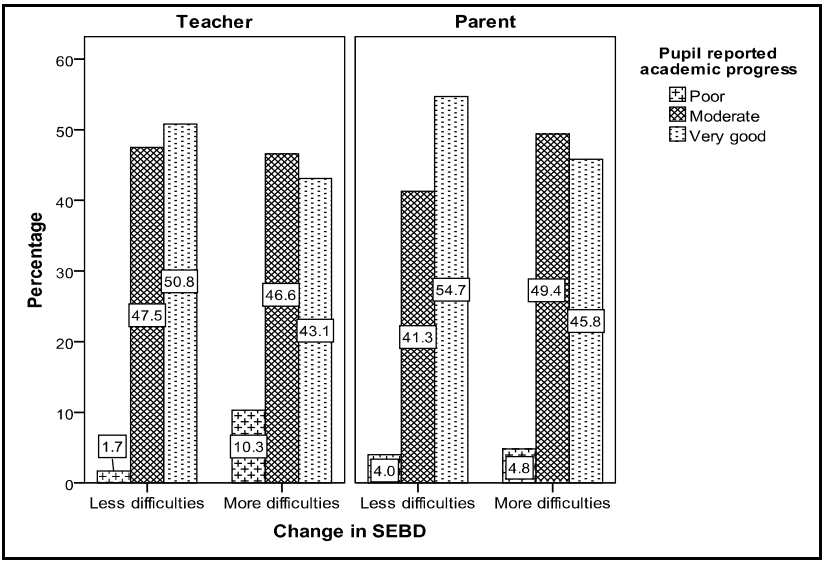

Figure 5.7: Change in SEBD by pupil-reported academic progress

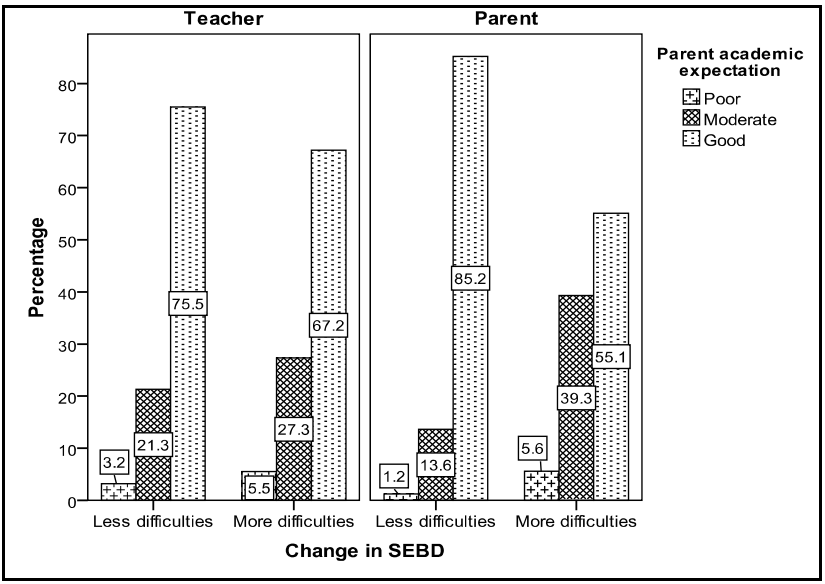

Figure 5.8: Change in SEBD by parental academic expectations

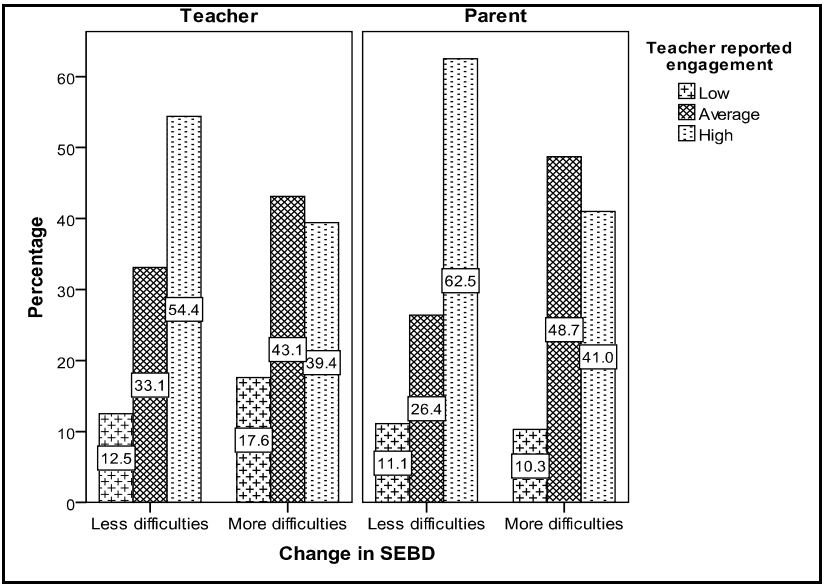

Figure 5.9: Change in SEBD by teacher-reported engagement

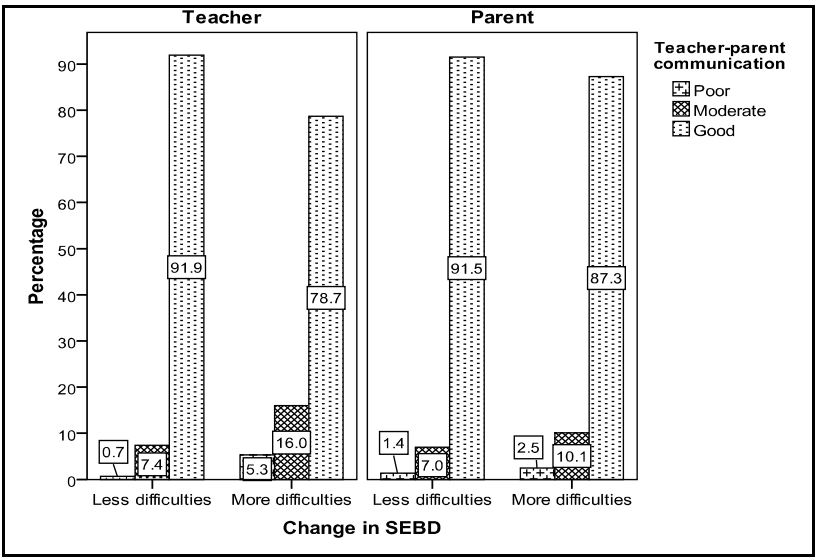

Figure 5.10: Change in SEBD by teacher-parent communication

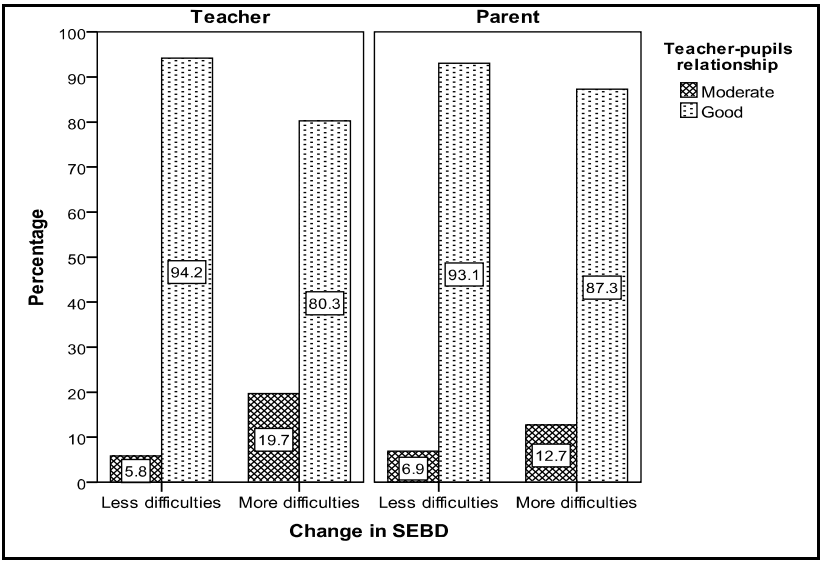

Figure 5.11: Change in SEBD by teacher-pupils relationship

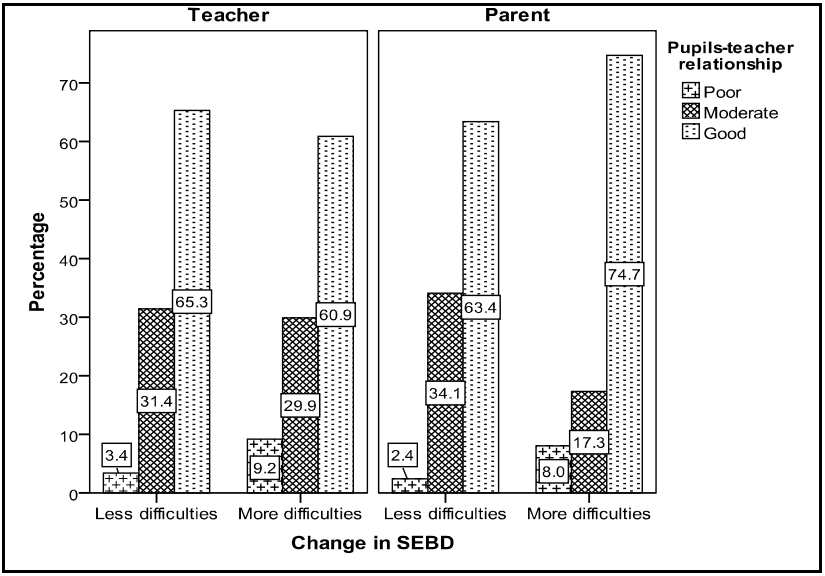

Figure 5.12: Change in SEBD by pupils-teacher relationship

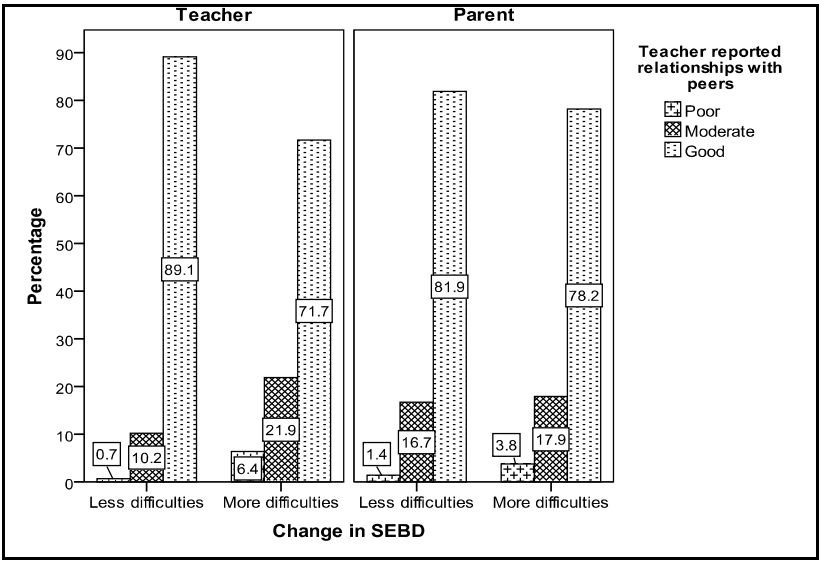

Figure 5.13: Change in SEBD by relationships with peers

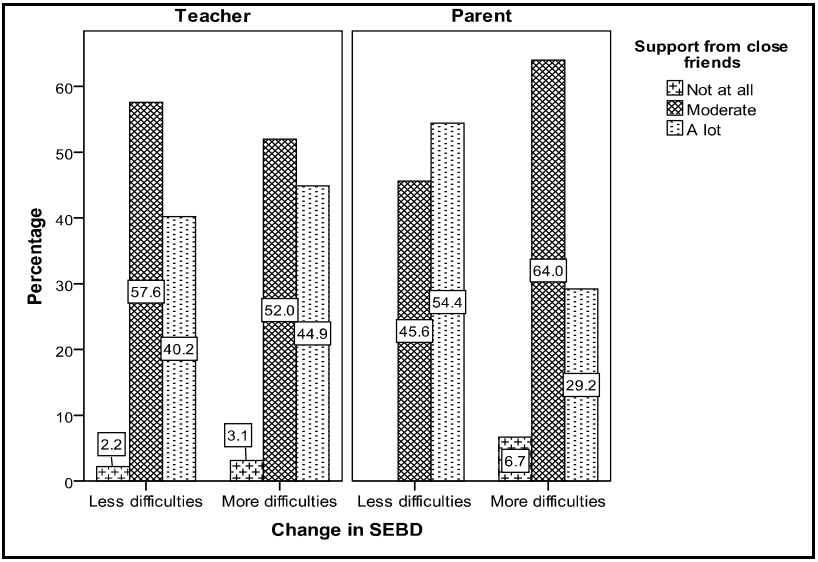

Figure 5.14: Change in SEBD by support from close friends

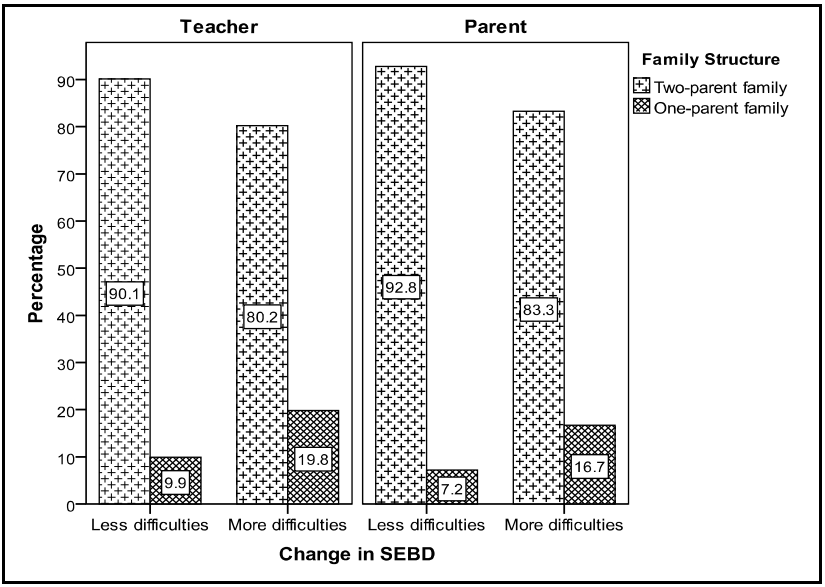

Figure 5.15: Change in SEBD by family structure

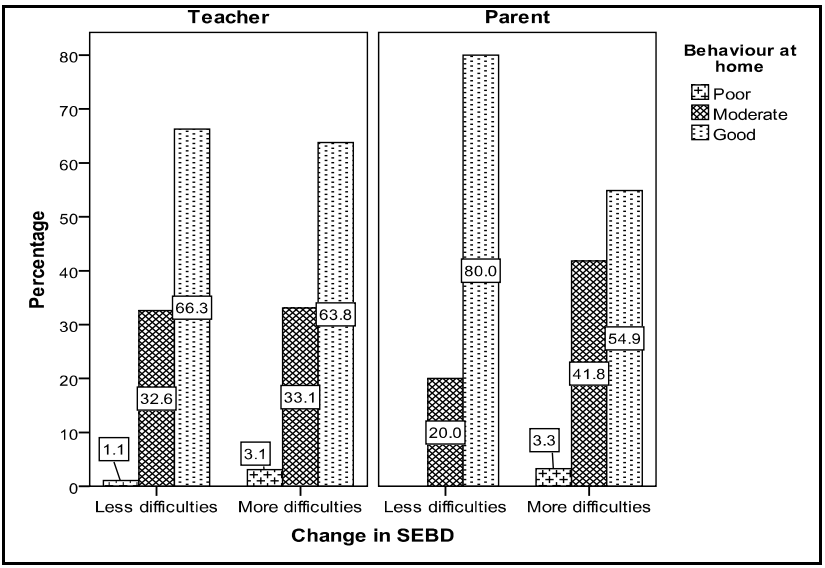

Figure 5.16: Change in SEBD by child's behaviour at home

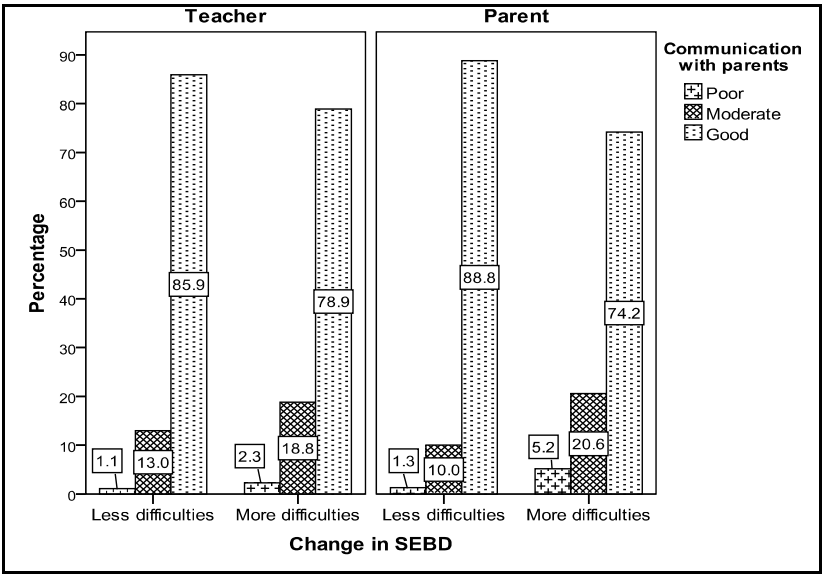

Figure 5.17: Change in SEBD by child's communication with parents

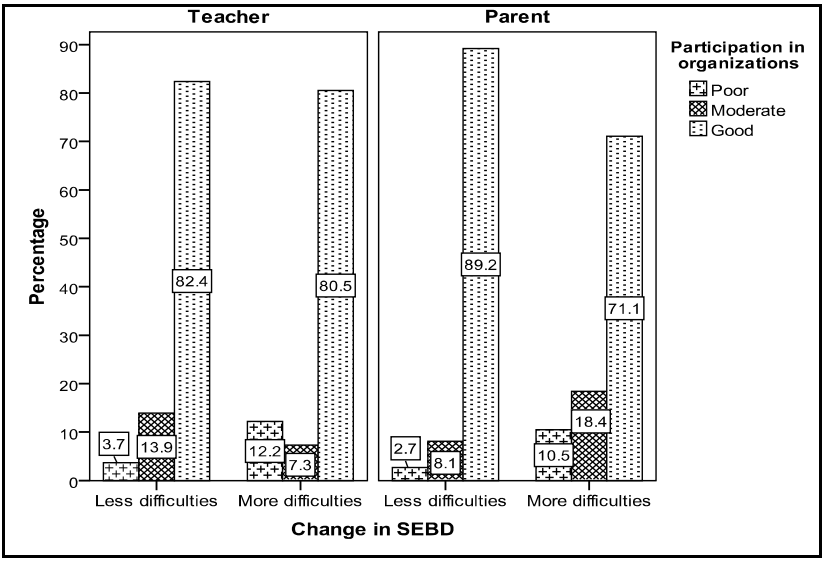

Figure 5.18: Change in SEBD by child's participation in organizations

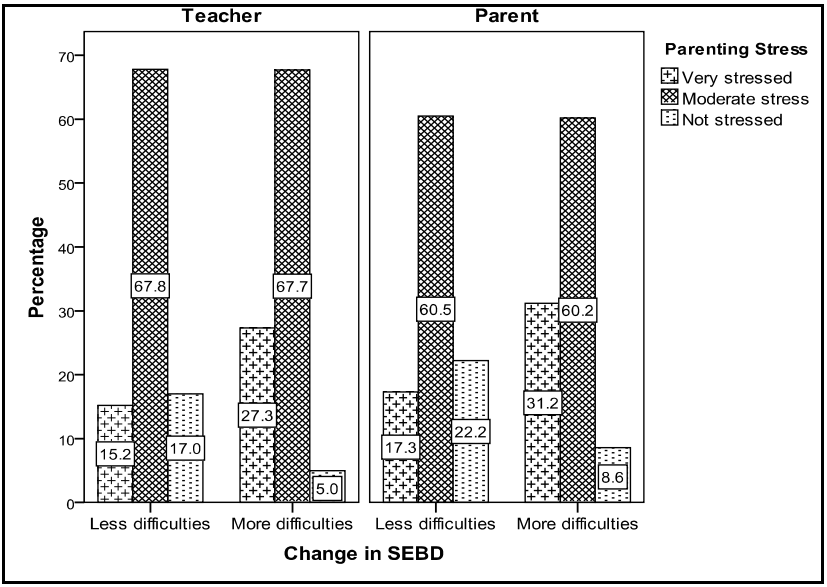

Figure 5.19: Change in SEBD by parenting stress

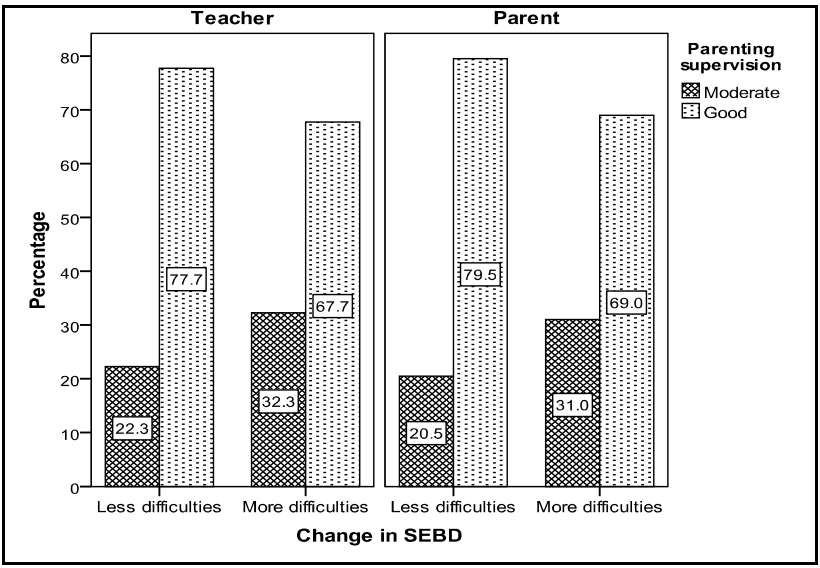

Figure 5.20: Change in SEBD by parenting supervision

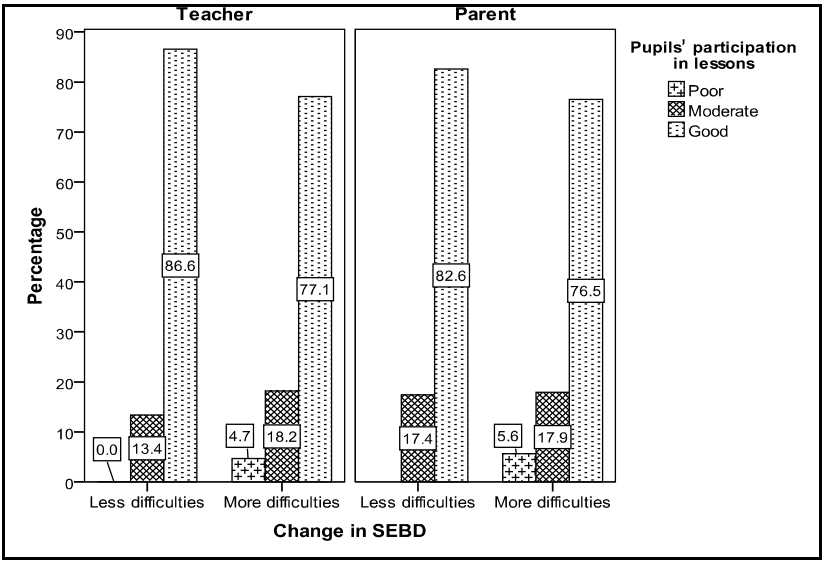

Figure 5.21: Change in SEBD by pupils' participation in lessons

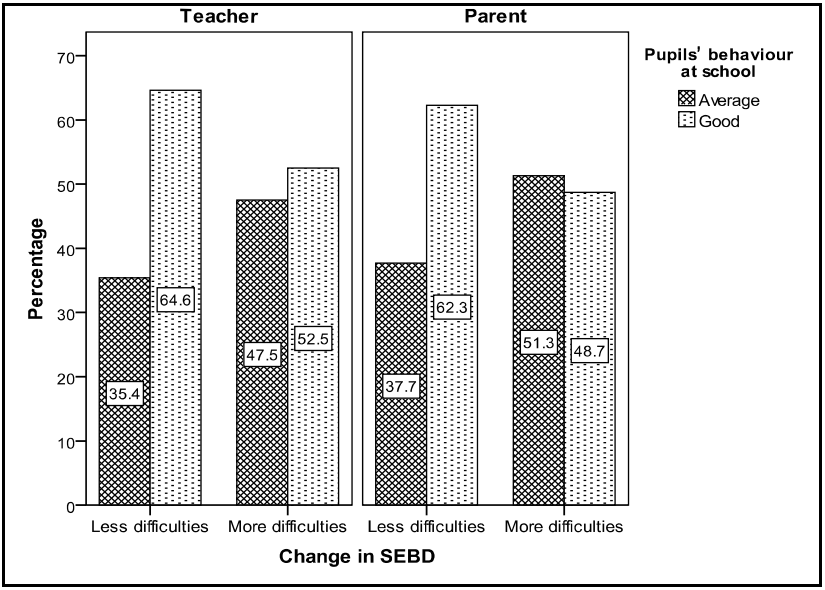

Figure 5.22: Change in SEBD by pupils' behaviour at school

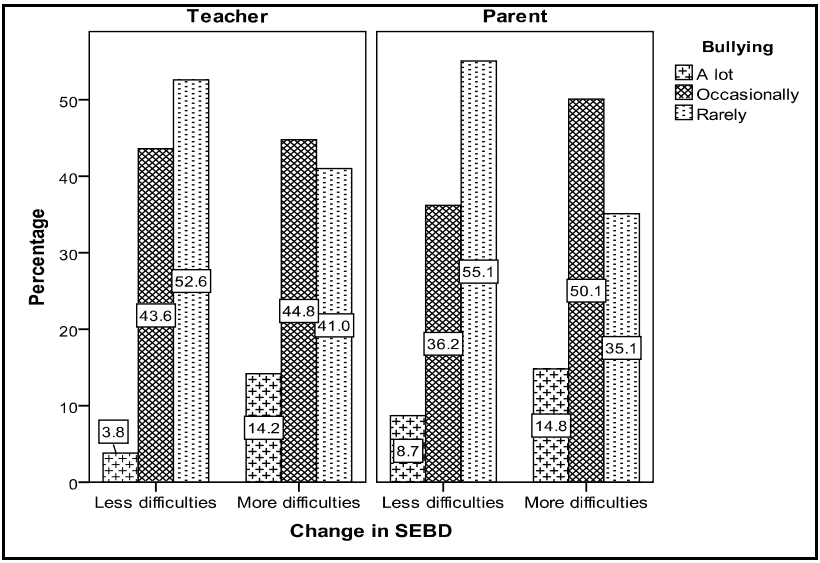

Figure 5.23: Change in SEBD by bullying at school

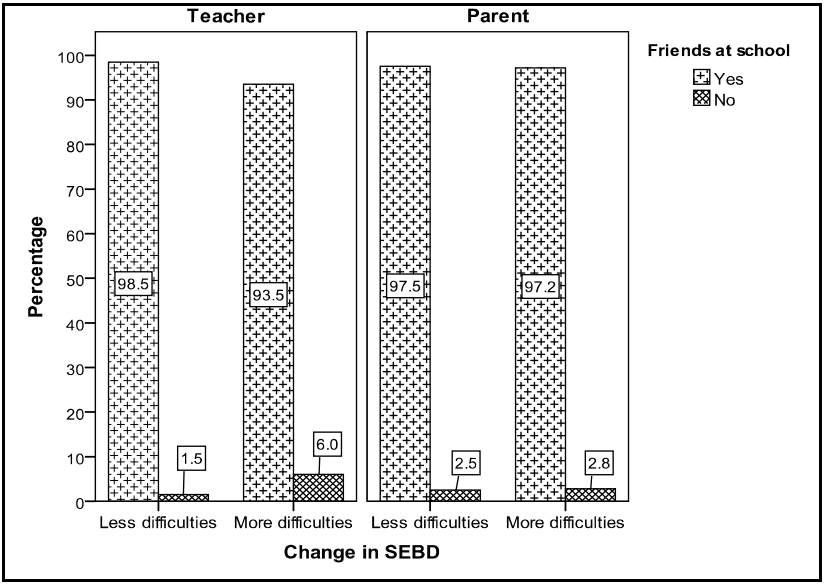

Figure 5.24: Change in SEBD by pupil's friends at school

6 Trajectory of Prosocial Behaviour from Year 1 to Year 4

One of the main objectives of this study was to identify those factors that influence the developmental trajectory of prosocial behaviour in primary school. Using the prosocial scores provided by teachers and parents when pupils were in Year 1 and then again in Year 4, it was possible to determine whether the pupils' prosocial behaviour improved or deteriorated over this three year period, and how that change is related to individual, school, home and community factors. In order to map this trajectory, pupils were grouped in three categories, namely those pupils whose prosocial score increased from Year 1 to Year 4 (Improved prosocial behaviour), those whose score decreased (Decreased prosocial behaviour), and those whose prosocial score remained unaltered (No change in prosocial behaviour). The last group was excluded from the analysis in this phase of the study. Table 6.1 shows the percentages of pupils in each of the three groups using the teachers' and parents' assessments. Both evaluations indicate a higher proportion of pupils who displayed improved behaviour over the three-year span when compared to those manifesting a decrease in prosocial behaviour. Teachers' evaluations identified a higher proportion of pupils whose prosocial behaviour decreased compared to parents. Around 20.7% of pupils in teachers' evaluations and 35.2% in parents' evaluations displayed no change.

Table 6.1: Percentage of pupils by type of change in prosocial behaviour scores

Group	Teachers' Evaluation	Parents' Evaluation
Decreased prosocial behaviour	36.0%	24.9%
Improved prosocial behaviour	43.3%	39.9%
No change in prosocial behaviour	20.7%	35.2%

The following sections describe how the positive (increase) or negative (decrease) changes in pupils' prosocial behaviour are related to the various individual, classroom, school, home and community factors explored in this study. As in the previous chapters, the variables have been grouped in three main sets, namely individual pupil variables, whole class and whole school variables. The analysis makes use of univariate logistic regression to examine the association between the likelihood of a pupil's positive/negative change in prosocial behaviour and any individual, classroom, school, home and community variables. The odds ratios and their corresponding 95% confidence intervals are provided only for the significant predictors.

6.1 Prosocial behavioural change by individual variables

6.1.1 Individual characteristics variables

Table 6.2 presents the change in prosocial behaviour over the three year period by individual characteristics variables, making use of both teachers' and parents' evaluations. Significant percentage changes are marked in bold. Table 6.3 presents the odds ratios and 95% confidence intervals computed for the significant predictors by both teachers' and parents' evaluations. These odds ratios are useful to examine how much more likely a pupil will exhibit prosocial behaviour change given the predictors.

Table 6.2: Change in prosocial behaviour by individual characteristics variables

Individual variables (Characteristics)		Teacher evaluation		Parent evaluation	
		More Prosocial	Less Prosocial	More Prosocial	Less Prosocial
Gender	Male	48.0%	48.8%	**48.1%**	**62.4%**
	Female	52.0%	51.2%	**51.9%**	**37.6%**
Language	Maltese	92.3%	92.9%	92.5%	94.6%
	English/other	7.7%	7.1%	7.5%	5.4%
Locality	North harbour	20.4%	25.7%	25.3%	30.2%
	South harbour	17.5%	10.8%	10.7%	12.8%
	South Eastern	19.4%	12.2%	18.7%	10.6%
	Western	17.5%	16.2%	24.0%	12.4%
	Northern	17.5%	25.7%	13.3%	21.3%
	Gozo	7.8%	9.5%	8.0%	12.8%
Illness or disability	Yes	11.2%	9.6%	9.2%	14.9%
	No	88.8%	90.4%	90.8%	85.1%
Medication or therapy	Yes	9.3%	8.2%	**6.6%**	**18.0%**
	No	90.7%	91.8%	**93.4%**	**82.0%**
Communication	Poor	**4.0%**	**12.4%**	**3.0%**	**14.4%**
	Moderate	**17.4%**	**27.0%**	**17.9%**	**20.7%**
	Good	**78.5%**	**60.6%**	**79.1%**	**64.9%**
Teacher reported self-esteem	Low	**1.3%**	**9.8%**	**1.5%**	**11.1%**
	Average	**33.6%**	**35.2%**	**31.3%**	**45.9%**
	High	**65.1%**	**54.9%**	**67.2%**	**42.9%**
Parent reported self-esteem	Low	1.4%	4.8%	2.6%	9.1%
	Average	31.5%	28.8%	25.0%	27.3%
	High	67.1%	66.3%	72.4%	63.6%
Teacher reported self-efficacy	Low	**4.7%**	**10.7%**	3.0%	8.1%
	Average	**36.9%**	**49.2%**	46.3%	48.6%
	High	**58.4%**	**40.2%**	50.7%	43.2%
Parent reported self-efficacy	Low	**0.0%**	**6.7%**	**0.0%**	**11.1%**
	Average	**42.5%**	**40.0%**	**39.5%**	**42.2%**
	High	**57.5%**	**53.3%**	**60.5%**	**46.7%**

Self-efficacy, self-esteem and communication skills are the strongest individual characteristics predictors according to both teachers' and parents' evaluations. Teachers' evaluations suggest that the estimated odds that pupils with high self-efficacy show an

improvement in their prosocial behaviour is 3.546 times (teacher-reported) and 2.936 times (parent-reported) the estimated odds of pupils having low self-efficacy. According to parents, the estimated odds ratio is 3.699 (parent-reported) and in the same direction. Similarly according to teachers, the estimated odds that a pupil with high self-esteem exhibits an increase in prosocial behaviour is 3.814 times the estimated odds of a pupil with low self-esteem; according to parents, the estimated odds ratio is 2.879 in the same direction. Parents' evaluations also show that female pupils as well as pupils not receiving any medication/intervention are more likely to show more prosocial behaviour as they move from one year to the other in primary school. There are also some indications, though the results are not significant, that pupils from particular regions such as South Eastern and Western may show an improvement in prosocial behaviour over time.

Table 6.3: Odds ratio of significant individual characteristics

Teachers' Evaluation				
Predictor	**Chi Square**	**P-value**	**Odds ratio**	**95% Conf. Int.**
Teacher reported self-esteem	11.04	0.004	3.814	(1.906 – 7.636)
Teacher reported self-efficacy	10.23	0.006	3.546	(1.905 – 6.602)
Parent reported self-efficacy	7.633	0.022	2.936	(1.544 – 5.584)
Communication	6.594	0.037	2.756	(1.522 – 4.992)
Parents' Evaluation				
Parent reported self-efficacy	11.04	0.004	3.699	(1.823 – 7.505)
Communication	7.224	0.027	3.026	(1.606 – 5.698)
Teacher reported self-esteem	6.884	0.032	2.879	(1.513 – 5.473)
Medication or therapy	4.445	0.035	2.644	(1.465 – 4.768)
Gender	4.176	0.041	2.294	(1.239 – 4.244)

6.1.2 Individual classroom and school variables

Table 6.4 presents the change in prosocial behaviour by individual classroom and school variables. Significant changes in percentages are marked in bold. Table 6.5 presents the odds ratio computed for the significant predictors by both teachers' and parents' evaluations.

Table 6.4: Change in prosocial behaviour by individual classroom and school variables

Individual variables (Learning)		Teacher evaluation		Parent evaluation	
		More Prosocial	Less Prosocial	More Prosocial	Less Prosocial
Teacher reported academic progress	Poor	14.8%	17.4%	**3.0%**	**16.2%**
	Average	27.5%	30.6%	**33.3%**	**21.6%**
	Very good	57.7%	52.1%	**63.6%**	**62.2%**
Pupil reported academic progress	Poor	4.6%	8.0%	**0.0%**	**8.7%**
	Average	47.9%	46.4%	**45.3%**	**43.5%**
	Very good	47.6%	45.5%	**54.7%**	**47.8%**
Teacher academic expectation	Poor	10.1%	12.4%	1.5%	5.4%
	Moderate	30.2%	28.9%	30.3%	27.0%
	Good	59.7%	58.7%	68.2%	67.6%
Parent academic expectation	Poor	**2.7%**	**11.7%**	**1.4%**	**10.7%**
	Moderate	**14.9%**	**21.4%**	**25.7%**	**30.6%**
	Good	**82.4%**	**67.0%**	**73.0%**	**58.7%**
Learning difficulties	Many	3.8%	6.3%	**1.4%**	**8.7%**
	Some	50.8%	52.7%	**25.7%**	**32.6%**
	None	45.4%	41.1%	**73.0%**	**58.7%**
Teacher reported learning support	Yes	16.1%	9.8%	13.5%	10.4%
	No	83.9%	90.2%	86.5%	89.6%
Pupil-reported support	Not much	13.4%	13.8%	7.0%	11.6%
	Moderate	37.5%	40.0%	44.2%	40.6%
	A lot	49.1%	46.2%	48.8%	47.8%
Peer support with work	Not much	7.2%	12.2%	8.5%	9.1%
	Moderate	40.5%	41.2%	39.7%	45.5%
	A lot	52.3%	46.6%	51.8%	45.5%
Support with homework	Not much	29.0%	37.8%	19.6%	34.2%
	Moderate	40.2%	36.5%	41.3%	36.8%
	A lot	30.8%	25.7%	39.1%	28.9%
Repeating year	Yes	4.0%	3.5%	4.5%	3.0%
	No	96.0%	96.5%	95.5%	97.0%
Teacher reported engagement	Low	**11.5%**	**25.4%**	**9.1%**	**16.8%**
	Average	**43.2%**	**39.3%**	**37.9%**	**42.6%**
	High	**45.3%**	**35.2%**	**53.0%**	**40.2%**
Pupil reported engagement	Low	6.8%	10.7%	2.9%	4.5%
	Average	44.0%	42.9%	43.5%	43.2%
	High	49.2%	46.4%	53.6%	52.3%

Attendance	Regular	96.3%	95.1%	99.0%	97.3%
	Irregular	3.7%	4.9%	1.0%	2.7%
Teacher-parent communication	Poor	**2.0%**	**5.8%**	0.0%	3.0%
	Moderate	**5.4%**	**13.1%**	8.1%	6.0%
	Good	**92.6%**	**81.1%**	91.9%	91.0%
Parent-school communication	Moderate	23.4%	29.7%	34.2%	39.1%
	Good	76.6%	70.3%	65.8%	60.9%
Teacher-pupils relationship	Moderate	**8.1%**	**23.0%**	4.5%	10.8%
	Very good	**91.9%**	**77.0%**	95.5%	89.2%
Pupils-teacher relationship	Poor	4.8%	8.0%	5.8%	6.8%
	Moderate	30.1%	29.5%	27.4%	27.3%
	Very good	65.1%	62.5%	66.8%	65.9%
Teacher reported relationships with peers	Poor	1.3%	8.2%	3.5%	5.7%
	Moderate	12.8%	23.8%	14.9%	15.9%
	Very good	85.9%	68.0%	81.6%	78.4%
Pupil reported peer relationships	Poor	6.3%	9.9%	4.5%	8.3%
	Moderate	27.1%	26.0%	31.8%	35.1%
	Very good	66.6%	64.1%	63.6%	56.5%
Friends at school	Yes	**97.0%**	**95.0%**	**99.3%**	**97.5%**
	No	**3.0%**	**5.0%**	**0.7%**	**2.5%**
Close friends at school	Yes	97.3%	95.5%	**95.7%**	**93.2%**
	No	2.7%	4.5%	**4.3%**	**6.8%**

Teachers underline relationships as the strongest predictor of prosocial behaviour, with teacher-parent, peer and teacher-pupils relationships being the three strongest predictors. On the other hand, parents, highlight engagement and learning as the key promotive factors. According to teachers' evaluations, the estimated odds that a pupil exhibits more prosocial behaviour with time when there is good teacher-parent communication are 5.689 times the estimated odds when that relationship is poor; the estimated odds for peer relationships and teacher-pupils relationships are 4.236 and 4.129 respectively. Such strong odds ratios underline the protective value of healthy classroom relationships amongst all members concerned, including parents.

Teachers' and parents' both underline engagement and support from close friends as other key predictors. Good academic progress, pupil engagement, parental academic expectations, support

from friends as well as play with peers are key promotive factors according to parents' evaluations. Other learning-related factors such as receiving support with learning and homework, regular attendance and not repeating a year may also be positively related to prosocial behaviour, but the relationships are not significant.

Table 6.5: Odds ratio of significant classroom and school variables

Teachers' Evaluation				
Predictor	**Chi Square**	**P-value**	**Odds ratio**	**95% Conf. Int.**
Teacher-parent communication	22.69	0.000	5.689	(3.070 – 10.55)
Relationships with peers	14.90	0.001	4.236	(2.472 – 9.806)
Teacher-pupils relationship	11.94	0.001	4.129	(2.380 – 7.162)
Teacher reported engagement	9.210	0.010	3.756	(2.186 – 6.449)
Support from close friends	7.726	0.021	2.568	(1.434 – 4.596)
Parents' Evaluation				
Teacher reported engagement	6.593	0.037	2.711	(1.625 – 4.520)
Academic progress by parent	6.340	0.042	2.569	(1.505 – 4.389)
Learning difficulties	6.293	0.043	2.419	(1.394 – 4.194)
Academic progress by teacher	6.274	0.044	2.264	(1.320 – 3.881)
Parent academic expectation	6.158	0.046	2.019	(1.126 – 3.622)
Support from close friends	6.073	0.048	1.873	(1.068 – 3.289)
Plays with peers	6.032	0.049	1.694	(1.018 – 2.820)

According to teachers' evaluations:

- Pupils whose parents and teacher communicate well together are 5.689 times more likely to engage in prosocial behaviour over time, than when that relationship is poor;
- Pupils who have a good relationship with their peers are 4.236 times more likely to engage in prosocial behaviour over time than pupils who have poor peer relationships;
- Pupils who have a good relationship with their teacher are 4.129 times more likely to engage in prosocial behaviour over time than pupils who have a poor relationship;
- Pupils who are engaged in the learning process are 3.756 time more likely to engage in prosocial behaviour over time than less engaged peers; according to parents' evaluations, the odds ratio is 2.711;

- Pupils who have support from close friends are 2.568 times more likely to engage in prosocial behaviour over time than less supported peers; according to parents' evaluations, the odds ratio is 1.873.

According to parents' evaluations,

- Pupils with satisfactory academic progress are 2.569 time more likely to engage in prosocial behaviour over time than peers whose progress is poor;
- Pupil with no learning difficulties are 2.419 time more likely to engage in prosocial behaviour over time than peers experiencing learning difficulties;
- Pupils whose parents hold high academic expectations for them are 2.019 times more likely to engage in prosocial behavior over time than pupils of parents with lower expectations;
- Pupils who play frequently with their peers are 1.694 times more likely to engage in prosocial behaviour over time than peers who engage in less play.

6.1.3 Individual home and community variables

Table 6.6 presents the change in prosocial behaviour over the three year period by individual home and community variables, making use of both teachers' and parents' evaluations. Teachers' evaluations underline family structure and family dynamics such as conflict, communication, cohesion and time as the key predictors of prosocial behaviour, while parents on the other hand, take a more multifactorial view including relationships, income and child's behaviour at home besides the predictors already mentioned. Family structure emerges again as the key predictor from teachers' evaluations: the estimated odds that a child living in a two-parent family will engage in more prosocial behaviour over time are 3.766 times the odds for a child living in a single-parent family; according to parents, the estimated odds ratio is 2.173 in the same direction.

Table 6.6: Change in prosocial behaviour by individual home and community variables

Individual variables (Home and Community)		Teacher evaluation		Parent evaluation	
		More Prosocial	Less Prosocial	More Prosocial	Less Prosocial
Family Structure	Two parent	**95.1%**	**86.7%**	**95.6%**	**85.9%**
	One parent	**4.9%**	**13.3%**	**4.4%**	**14.1%**
Family Size	1 child	21.5%	18.4%	14.6%	16.9%
	2 children	44.9%	48.7%	60.4%	49.4%
	3 children	22.4%	25.0%	18.8%	22.1%
	4 or more	11.2%	7.9%	6.3%	11.7%
Father Occupation	Professional	32.0%	34.7%	31.3%	37.2%
	Technical	23.7%	18.9%	22.4%	25.6%
	Semi Skilled	40.0%	39.1%	40.3%	30.2%
	State income	4.3%	7.2%	6.0%	7.0%
Mother Occupation	Professional	19.4%	23.2%	20.0%	16.3%
	Technical	9.7%	10.5%	10.0%	18.6%
	Semi Skilled	5.6%	4.2%	10.0%	6.3%
	House carer	65.3%	62.1%	60.0%	58.8%
Father Education	Primary	2.9%	2.9%	4.6%	4.4%
	Secondary	45.7%	54.9%	47.2%	48.9%
	Post secondary	30.0%	26.5%	24.6%	35.6%
	Tertiary	21.4%	15.7%	23.6%	11.1%
Mother Education	Primary	1.9%	1.3%	6.3%	2.6%
	Secondary	61.3%	59.2%	52.1%	51.3%
	Post Secondary	21.7%	18.4%	22.9%	25.9%
	Tertiary	15.1%	21.1%	18.8%	20.1%
Family Income	Less than €150	7.4%	8.2%	**3.1%**	**12.7%**
	€150 – €300	58.8%	64.4%	**65.0%**	**63.4%**
	Over €300	33.8%	27.4%	**31.9%**	**23.9%**
Family Time	Little	**2.7%**	**8.7%**	**2.1%**	**10.6%**
	Average	**44.3%**	**48.9%**	**50.0%**	**57.4%**
	A lot	**53.0%**	**42.5%**	**47.9%**	**31.9%**
Behaviour at home	Poor	2.7%	4.8%	**0.0%**	**6.4%**
	Moderate	31.5%	33.5%	**34.2%**	**36.2%**
	Good	65.8%	61.7%	**65.8%**	**57.4%**
Communication with parents	Poor	**1.4%**	**8.8%**	**0.0%**	**6.5%**
	Moderate	**12.3%**	**15.0%**	**16.2%**	**23.9%**
	Good	**86.3%**	**76.2%**	**83.8%**	**69.6%**

Relationship with siblings	Poor	2.4%	3.0%	**1.6%**	**11.0%**
	Moderate	20.2%	25.8%	**27.0%**	**30.0%**
	Good	77.4%	71.2%	**71.4%**	**59.0%**
Relationship with relatives	Moderate	8.3%	9.5%	**1.4%**	**21.3%**
	Good	91.7%	90.5%	**98.6%**	**78.7%**
Parent reported friends	Yes	98.1%	93.9%	**99.5%**	**93.3%**
	No	1.9%	6.1%	**0.5%**	**6.7%**
Membership in organizations	Yes	76.9%	76.7%	80.0%	77.0%
	No	23.1%	23.3%	20.0%	23.0%
Participation in organizations	Poor	5.6%	7.9%	7.3%	7.8%
	Moderate	10.0%	9.5%	12.2%	20.3%
	Regular	84.4%	82.5%	80.5%	71.9%
Family Cohesion	Little	**0.0%**	**5.9%**	**1.7%**	**5.1%**
	Average	**14.9%**	**19.5%**	**11.3%**	**20.8%**
	A lot	**85.1%**	**74.6%**	**87.0%**	**74.1%**
Family Conflict	Violently	**0.4%**	**4.0%**	2.0%	3.0%
	With shouting	**12.9%**	**18.9%**	21.6%	26.7%
	Discussion	**86.7%**	**77.1%**	76.4%	70.3%
Parenting Stress	Very stressed	**16.2%**	**20.2%**	**18.7%**	**29.2%**
	Slight stress	**67.9%**	**73.0%**	**64.0%**	**60.4%**
	Not stressed	**15.9%**	**6.8%**	**17.3%**	**10.4%**
Parenting Difficulty	Very difficult	53.8%	58.2%	56.0%	67.4%
	Slightly difficult	40.6%	37.7%	40.0%	30.4%
	Not difficult	5.7%	4.1%	4.0%	2.2%
Parenting quality time	Moderate	17.6%	19.6%	19.6%	21.3%
	A lot	82.4%	80.4%	80.4%	78.7%
Parenting supervision	Moderate	16.4%	25.5%	21.9%	29.8%
	A lot	83.6%	74.5%	78.1%	70.2%
Parenting strategies	Discipline	25.0%	28.1%	25.4%	31.7%
	Punishment	10.4%	11.6%	11.5%	17.1%
	Rewards	21.6%	19.9%	23.0%	18.3%
	Persuasion	22.5%	20.5%	23.0%	15.9%
	Discussion	20.6%	19.9%	17.2%	17.1%
Neighbourhood Safety	Not safe	6.8%	7.5%	8.0%	10.4%
	Slightly safe	58.1%	61.7%	63.7%	62.5%
	Very safe	35.1%	30.8%	28.3%	27.1%
Neighbourhood Support	Not helpful	20.6%	31.5%	22.7%	38.3%
	Slightly helpful	54.2%	46.6%	54.7%	40.4%
	Very helpful	25.2%	21.9%	22.7%	21.3%

Communication with parents, family cohesion, family time and parenting stress are the other common predictors according to both teachers' and parents' evaluations. On the other hand, neighbourhood safety and support did not emerge as predictors of prosocial behaviour, while SES features as a relatively weak predictor. Supportive and protective homes are thus characterized by two-parents, cohesive families, constructive conflict resolution, time for family members, lack of parenting stress, and good relationships between the child and parents, siblings, relatives and friends. Good quality parenting time and supervision and a positive parenting style characterized by reward and persuasion rather than punishment also seem to be associated with increased prosocial behaviour over time.

Table 6.7 presents the odds ratio and corresponding 95% confidence intervals computed for the significant predictors by both teachers' and parents' evaluations.

Table 6.7: Odds ratio of significant individual home and community variables

Teachers' Evaluation				
Predictor	**Chi Square**	**P-value**	**Odds ratio**	**95% Conf. Int.**
Family Structure	6.465	0.011	3.766	(1.926 – 7.362)
Family Conflict	8.035	0.018	3.318	(1.796 – 6.126)
Communication with parents	6.822	0.033	2.198	(1.238 – 3.905)
Family Cohesion	6.705	0.035	2.046	(1.112 – 3.764)
Family Time	6.388	0.041	1.977	(1.105 – 3.540)
Parenting Stress	6.340	0.042	1.846	(1.021 – 3.336)
Parents' Evaluation				
Relationship with relatives	13.71	0.000	4.536	(2.302 – 8.937)
Parent reported friends	5.596	0.018	3.549	(1.870 – 6.739)
Family Income	7.633	0.022	3.264	(1.824 – 5.842)
Communication with parents	7.378	0.025	2.981	(1.643 – 5.409)
Relationship with siblings	7.151	0.028	2.573	(1.469 – 4.507)
Family Cohesion	6.648	0.036	2.246	(1.270 – 3.973)
Family Structure	4.261	0.039	2.173	(1.245 – 3.791)
Family Time	6.438	0.040	1.943	(1.109 – 3.403)
Behaviour at home	6.115	0.047	1.755	(1.056 – 2.916)
Parenting Stress	6.073	0.048	1.611	(1.001 – 2.594)

According to teachers' and parents' evaluations:

- A child living in a two-parent family is 3.766 and 2.173 times respectively more likely to engage in prosocial behaviour over time than children living with single parents;
- A child who has good communication with parents is 2.198 and 2.981 times respectively more likely to engage in prosocial behaviour over time than a child who has a poor relationship with parents;
- A child living in a cohesive family is respectively 2.046 and 2.246 times respectively more likely to engage in prosocial behaviour over time than a child coming from a less cohesive family;
- Families which provide adequate time for their members are 1.997 and 1.943 times respectively more likely to have children who engage in prosocial behaviour over time than families with little time for their members;
- A child living in a family with low levels of parenting stress is 1.846 and 1.611 times respectively more likely to engage in prosocial behaviour than a child whose parents are stressed.

According to parents' evaluation

- A child who has good relationships with relatives and siblings is 4.536 and 2.573 times respectively more likely to engage in prosocial behaviour than a child with poorer relationships;
- A child living in a family with a good income is 3.264 times more likely to engage in prosocial behaviour over time than a child living in poverty;
- A well-behaved child at home is 1.755 times more likely to engage in prosocial behaviour over time than a child with behaviour problems at home.

According to teachers' evaluation a child coming from a family which resolves conflicts constructively is 3.318 times more likely to engage in prosocial behaviour than a child coming from more violent families.

6.2 Whole classroom variables

Table 6.8 presents the change in SEBD over the three year period by whole classroom variables, making use of both teachers' and parents' evaluations. Significant percentage changes are marked in bold. Table 6.9 presents the odds ratio computed for the significant predictors by both teachers' and parents' evaluations.

Table 6.8: Change in prosocial behaviour by whole classroom variables

Classroom variables		Teacher evaluation		Parent Evaluation	
		More Prosocial	Less Prosocial	More Prosocial	Less Prosocial
Pupils' participation in lessons	Poor	**0.0%**	**2.5%**	0.0%	1.6%
	Average	**14.1%**	**24.2%**	18.9%	17.2%
	High	**85.9%**	**73.3%**	81.1%	81.3%
Pupils' involvement in decisions	Poor	5.6%	9.2%	2.7%	9.4%
	Average	51.7%	54.2%	62.2%	53.1%
	High	42.7%	36.7%	35.1%	37.5%
Pupils' collaboration in learning	Poor	0.7%	0.8%	0.0%	2.0%
	Average	28.0%	34.2%	30.8%	32.4%
	High	71.3%	65.0%	69.2%	65.6%
Pupils' behaviour during play	Poor	2.1%	2.5%	0.0%	2.7%
	Average	43.4%	50.8%	53.1%	45.9%
	Good	54.5%	46.7%	46.9%	51.4%
Pupils' sense of classroom community	Poor	**0.0%**	**5.7%**	**0.0%**	**3.0%**
	Average	**4.9%**	**8.4%**	**1.9%**	**10.1%**
	High	**95.1%**	**85.9%**	**98.1%**	**87.9%**
Classroom resources	Not adequate	**9.2%**	**20.8%**	**9.3%**	**26.6%**
	Adequate	**71.1%**	**69.2%**	**76.6%**	**65.3%**
	Very adequate	**19.7%**	**10.0%**	**14.1%**	**8.1%**
Teachers' training	Adequate	**47.9%**	**61.7%**	54.7%	64.9%
	Very good	**52.1%**	**38.3%**	45.3%	35.1%

Classroom resources and pupils' sense of community are two common predictors according to both teachers' and parents' evaluations: pupils attending well-resourced classrooms are 3.893 and 2.010 times respectively more likely to engage in prosocial

behaviour than pupils in less equipped classrooms; similarly pupils attending classrooms with a sense of community are 1.860 and 2.010 times respectively more likely to engage in prosocial behaviour than pupils without a sense of community. Pupils attending classrooms where pupils participate actively in lessons and teachers are well trained are also more likely to engage in prosocial behaviour according to teachers' evaluations; it must be kept in mind, however, that the vast majority of teachers in the study are well trained.

Table 6.9: Odds ratio of significant whole classroom variables

Teachers' Evaluation				
Predictor	**Chi Square**	**P-value**	**Odds ratio**	**95% Conf. Int.**
Classroom resources	10.23	0.006	3.893	(1.945 - 7.791)
Participation during lessons	9.421	0.009	3.647	(1.979 - 6.722)
Teachers' training	5.024	0.025	2.496	(1.323 - 4.710)
Sense of classroom community	6.340	0.042	1.860	(1.039 - 3.331)
Parents' Evaluation				
Sense of classroom community	6.822	0.033	2.761	(1.552 - 4.913)
Classroom resources	6.202	0.045	2.010	(1.168 - 3.459)

6.3 Whole school variables

Table 6.10 presents the change in prosocial behaviour over the three year period by whole school variables. Significant percentage changes are marked in bold. Table 6.11 presents the odds ratio computed for the significant predictors.

According to both teachers' and parents' evaluations the two strongest whole school predictors are bullying and participation in school activities. Pupils attending schools where bullying is rare are 2.976 and 4.126 times respectively more likely to engage in prosocial behaviour over time than peers attending schools where bullying is high; the corresponding odds ratio for engagement in school activities are respectively 2.555 for teachers and 2.893 for

parents. Teachers' evaluations also indicate that pupils attending schools with good behaviour are more likely to manifest prosocial behaviour themselves over time; parents' evaluations on the other hand suggest that pupils' support and collaboration is another whole school predictor of prosocial behaviour. As in the case of SEBD, staff relationships, collaboration and administrative support did not emerge as predictors of prosocial behaviour.

Table 6.10: Change in prosocial behaviour by whole school variables

School variables		Teacher evaluation		Parent evaluation	
		More Prosocial	Less Prosocial	More Prosocial	Less Prosocial
Pupils' behaviour at school	Average	**30.7%**	**42.7%**	42.2%	48.6%
	Good	**69.3%**	**57.3%**	57.8%	51.4%
Pupils' support and collaboration	Average	60.8%	64.5%	**57.9%**	**70.3%**
	Good	39.2%	35.5%	**42.1%**	**29.7%**
Engagement in school activities	Average	**28.0%**	**42.1%**	**32.9%**	**45.9%**
	Good	**72.0%**	**57.9%**	**67.1%**	**54.1%**
Pupils' participation in decisions	Poor	38.5%	51.2%	45.9%	46.3%
	Average	55.9%	44.6%	48.6%	50.6%
	Good	5.6%	4.1%	5.4%	3.1%
Bullying	A lot	**4.1%**	**6.3%**	**2.8%**	**13.1%**
	Occasional	**40.8%**	**47.5%**	**42.2%**	**46.4%**
	Low	**55.1%**	**46.2%**	**55.0%**	**40.5%**
Staff participation in school activities	Low	1.7%	2.1%	0.0%	2.7%
	Average	42.8%	43.4%	46.9%	51.4%
	High	55.6%	54.5%	53.1%	45.9%
Staff participation in decisions	Low	22.2%	24.8%	23.8%	27.0%
	Average	60.3%	61.1%	58.4%	59.5%
	High	17.5%	14.1%	17.8%	13.5%
Staff teamwork	Low	3.3%	5.4%	6.2%	8.1%
	Average	57.0%	58.3%	50.3%	51.4%
	High	39.7%	36.4%	43.5%	40.5%
Staff support and collegiality	Low	4.0%	5.0%	6.3%	8.1%
	Average	49.0%	50.4%	45.3%	51.4%
	High	47.1%	44.6%	48.4%	40.5%
Administrative support	Low	2.7%	5.0%	2.7%	4.7%
	Average	45.7%	52.0%	43.2%	42.2%
	High	49.6%	43.0%	54.1%	53.1%

Table 6.11 Odds ratio of significant whole school variables

Predictor	Chi Square	P-value	Odds ratio	95% Conf. Int.
Teachers' Evaluation				
Bullying	8.270	0.016	2.976	(1.496 - 5.921)
Engagement in school activities	5.502	0.019	2.555	(1.367 - 4.775)
Pupils' behaviour at school	4.095	0.043	1.861	(1.062 - 3.260)
Parents' Evaluation				
Bullying	11.62	0.003	4.126	(2.230 - 7.635)
Engagement in school activities	4.956	0.026	2.893	(1.623 - 5.158)
Pupils' support and collaboration	4.261	0.039	1.871	(1.122 - 3.121)

6.4 Multivariate Logistic Regression Analysis

To identify the dominant factors that predict the likelihood of a pupil displaying a change in prosocial behaviour over time, a multivariate logistic regression analysis was carried out for teachers' and parents' evaluations respectively, using solely the explanatory variables that were found to be significant in the univariate analysis.

The multivariate Logistic regression model using teachers' evaluation identified fourteen dominant predictors. This fourteen-predictor parsimonious model explains 63.8% of the total variation in the responses. Table 6.12 shows that eight of these predictors are individual variables mostly related to behaviour, relationships and learning; two are home and community variables, and two each are whole classroom and whole school variables respectively. According to teachers' evaluations, the best predictor of a change in the pupil's prosocial behaviour over time is pupil's relationship with peers, followed by good relationship with the teacher, low level of bullying at school, high self-esteem and self-efficacy, and engagement in classroom activities. The pupils most likely to engage in prosocial behaviour from the early to the junior primary school years are thus pupils who enjoy good relationships with peers and with their teacher, attend schools where bullying is low, engage actively in the learning process, and have high self-esteem, self-efficacy and good

communication skills. They come from two-parent families with low levels of conflict, are supported by close friends, and their teachers and parents work well together. They attend classrooms and schools where pupils participate actively in activities at both classroom and school levels.

Table 6.12: Multivariate logistic regression of all variables by teachers' evaluations

Teachers' Evaluation				
Predictor	**Chi square**	**P-value**	**Odds ratio**	**95% Conf. Int.**
Relationship with peers	11.62	0.003	4.431	(2.339 - 8.395)
Teacher-pupils relationship	7.033	0.008	4.016	(2.200 - 7.330)
Bullying	9.421	0.009	3.894	(2.167 - 6.997)
Teacher reported self-esteem	8.686	0.013	3.762	(2.077 - 6.813)
Teacher reported engagement	8.399	0.015	3.594	(2.052 - 6.295)
Teacher reported self efficacy	7.726	0.021	3.016	(1.705 - 5.335)
Family structure	4.956	0.026	2.864	(1.658 - 4.948)
Communication skills	7.013	0.030	2.456	(1.408 - 4.285)
Family conflict	6.822	0.033	2.268	(1.320 - 3.896)
Pupils' participation in lessons	6.763	0.034	2.133	(1.230 - 3.700)
Support from close friends	6.488	0.039	1.908	(1.096 - 3.323)
Engagement in school activities	4.218	0.040	1.877	(1.086 - 3.243)
Classroom resources	6.158	0.046	1.679	(1.029 - 2.741)
Teacher-parent communication	6.115	0.047	1.621	(1.001 - 2.625)

The multivariate logistic regression model using parents' evaluations identified another fourteen dominant predictors. This fourteen-predictor parsimonious model explains 60.7% of the total variation in the responses. Table 6.13 shows that five of these predictors are individual variables mostly related to behaviour, relationships and learning; six are home and community variables; and the other two a whole classroom and whole school variable respectively. According to parents' evaluations, the best discriminant predictor is bullying, followed by the child's positive relationship with relatives, two parent family, high self-efficacy and good family income. The pupils most likely to engage in prosocial behaviour from the early to the junior primary school years are thus female

pupils who attend schools where bullying is rare, have good relationships with relatives and with parents, and come from two-parent, good income families with low levels of parenting stress. They have high self-efficacy and good communication skills, are actively engaged in learning at school, have friends and are supported by close friends, attend classrooms with a high sense of community and schools with high level of pupil participation in school activities.

Table 6.13: Multivariate logistic regression of all variables by parents' evaluations

Parents' Evaluation				
Predictor	**Chi Square**	**P-value**	**Odds ratio**	**95% Conf. Int.**
Bullying	13.82	0.001	4.398	(2.232 - 8.665)
Relationship with relatives	8.284	0.004	4.016	(2.107 - 7.653)
Family structure	6.196	0.013	3.589	(1.932 - 6.667)
Parent-reported self efficacy	8.399	0.015	3.521	(1.967 - 6.302)
Family income	7.927	0.019	3.466	(1.952 - 6.155)
Teacher-reported engagement	7.545	0.023	3.250	(1.784 - 5.920)
Parent reported friends	4.828	0.028	3.101	(1.722 - 5.583)
Parenting stress	7.081	0.029	3.049	(1.730 - 5.372)
Gender	4.546	0.033	2.646	(1.473 - 4.754)
Communication skills	6.763	0.034	2.455	(1.418 - 4.250)
Support from close friends	6.540	0.038	2.144	(1.248 - 3.683)
Communication with parents	6.340	0.042	1.943	(1.158 - 3.260)
Sense of classroom community	6.247	0.044	1.817	(1.096 - 3.013)
Engagement in school activities	3.875	0.049	1.648	(1.010 - 2.690)

Figure 6.1 shows that bullying at school, family structure, pupil's communication skills, pupils' engagement in classroom and school activities, and support from close friends are significant predictors in both teachers' and parents' evaluations. As in the case of the SEBD predictors, teachers' evaluations underlined key factors related to school, such as positive relationship with peers and teacher, low level of bullying, high self-esteem and high academic engagement. Parents' evaluations on the other hand, are broader, with a combination of individual, school and home predictors. Apart

from bullying at school, the top predictors include good relationships with relatives, two parent family, high self-efficacy and good family income. Considering the ranking, odds ratio, and teachers' and parents' evaluations, it would seem that the strongest predictors of prosocial behaviour over the years in the primary school, are low bullying at school, pupil's good relationships with the teacher, peers and family members, high self-efficacy and self-esteem, active engagement in lessons, and two parent families with good income.

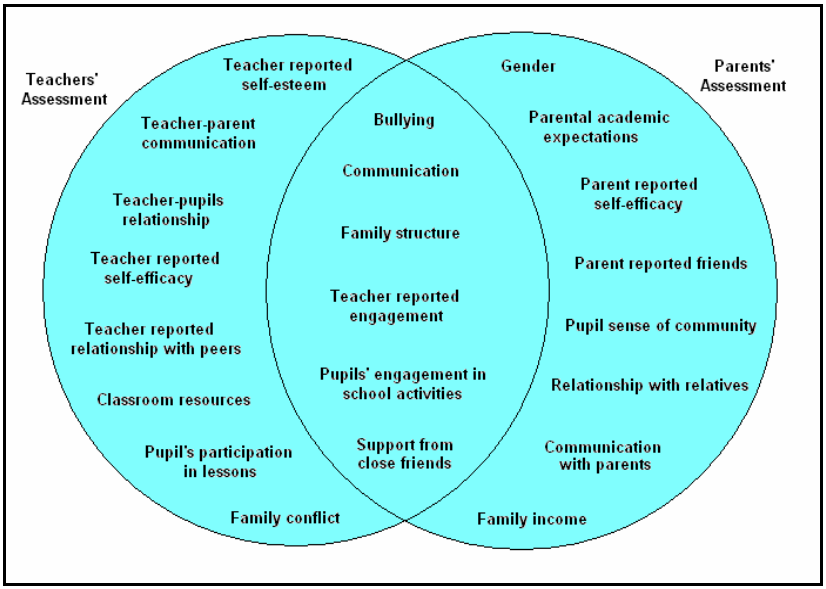

Figure 6.1: Best predictors of prosocial behaviour change by teachers' and parents' evaluations

A longitudinal increase in prosocial behaviour is more likely to occur if a pupil has good communication skills, high self-esteem and self-efficacy, is not on medication/therapy and is a female (parents). S/he has good relationships with teacher and peers, plays with and is supported by peers, is academically engaged, making good progress, and with good teacher-parent communication and high parental academic expectations. S/he is likely to come from a

two-parent, cohesive family with high quality time and low levels of conflict and parental stress, has good relationship with parents and siblings, and is well behaved at home. S/he attends a classroom with adequate resources and well trained teachers, where pupils have a sense of community and participate actively in activities. The school s/he attends has a low level of bullying, good pupil behaviour, high pupil participation in school activities and pupil support and collaboration.

Figures 6.3-6.24 exhibit the associations between the likelihood of a positive/negative change in prosocial behaviour and the significant individual, classroom, school, home and community variables that were identified by the logistic regression models.

6.5 The cumulative effect of promotive factors

The study examined the cumulative effect of the various promotive factors identified above on the pupils' well-being and mental health. For each pupil, the number of promotive factors was counted from the list of significant predictors, and pupils were then grouped into categories according to the numbers of promotive factors they were exposed to. For all the significant promotive factors, teachers and parents shared similar views about which individual, classroom, school, home and community factors predict an improvement in prosocial behaviour. In 32.7% of the pupils, no promotive factor was present; one promotive factor was present in 30.0% of the participants, two promotive factors in 16.0%, three in 11.3%, four in 6.0% and five in 4.0%.

Figure 6.2 shows the percentage of pupils within each level of mental health problems, grouped by the number of promotive factors present. It is evident that the percentage of possible as well as probable mental health problems decreases steadily with every additional promotive factor ($\chi^2 = 19.68,\ df = 10,\ p = 0.032$). The percentage of pupils showing at least signs of mental health problems (possible and probable outcome in the SDQ algorithm) is

59.2% in the group without any promotive factors, decreasing to 42.2% when one promotive factor is present and 33.3% in the case of two promotive factors. The risk of mental health continues to decrease as the number of promotive factors increases, going down to 23.5% when three promotive factors are present and to 11.1% when there are four promotive factors. No pupil displayed mental health problems when there are five promotive factors. This means that one third of young primary school students (33%) have a 25% possibility of developing mental health problems and 35% the probability of mental health issues. On the other hand, having three or more promotive factors reduces significantly the probability of mental health problems: 11% (3 promotive factors) have only a 6% probability of developing mental health issues, while 10% (having 4 or more) appear to be protected from mental health problems.

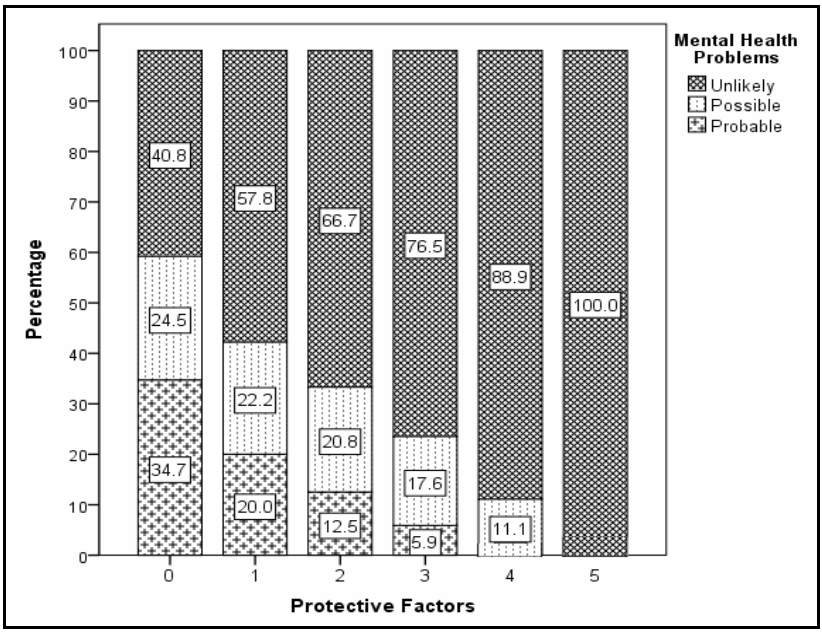

Figure 6.2: Likelihood of mental health difficulties by number of promotive factors

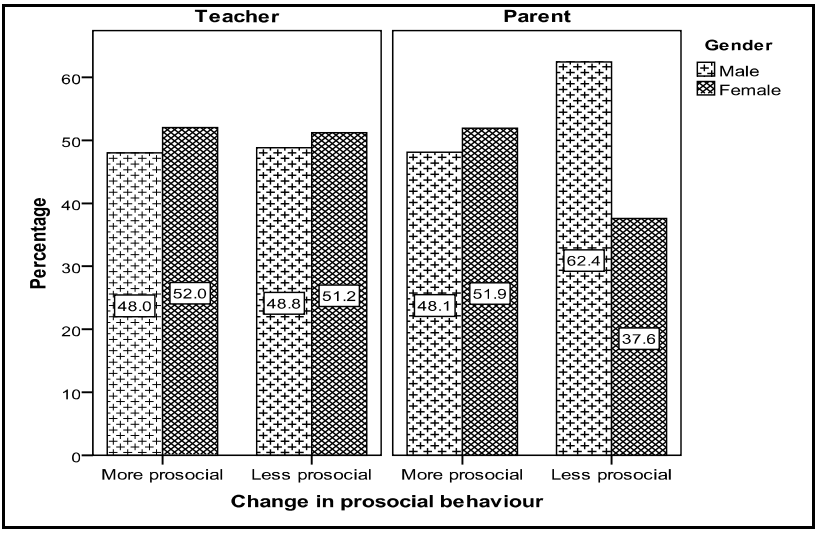

Figure 6.3: Change in prosocial behaviour by gender

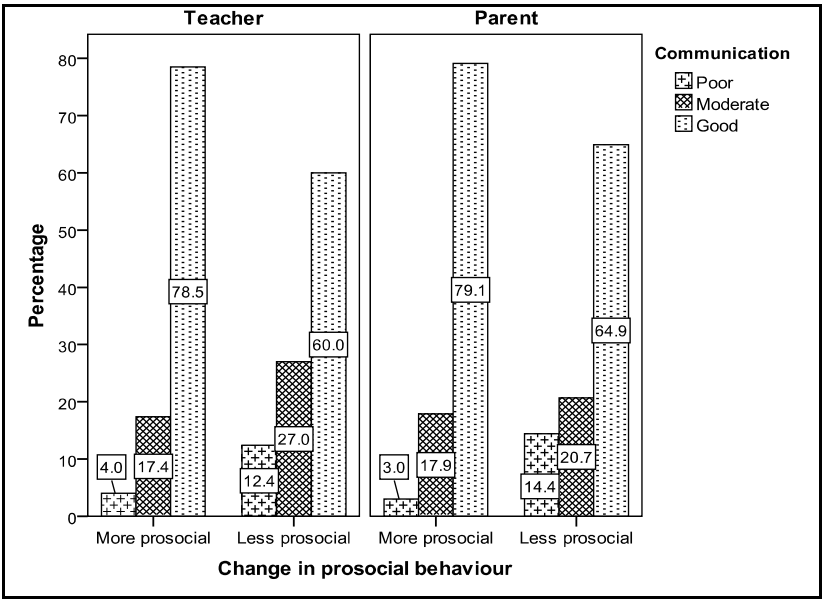

Figure 6.4: Change in prosocial behaviour by pupil's communication

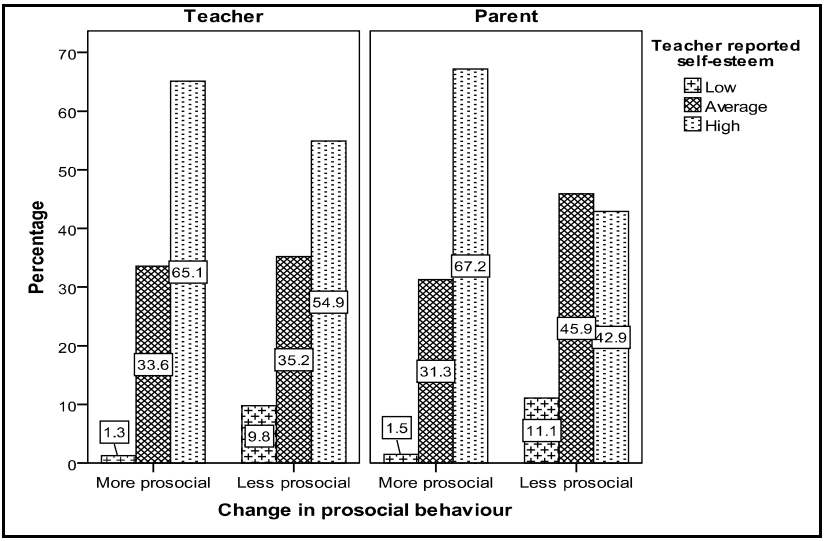

Figure 6.5: Change in prosocial behaviour by teacher-reported self-esteem

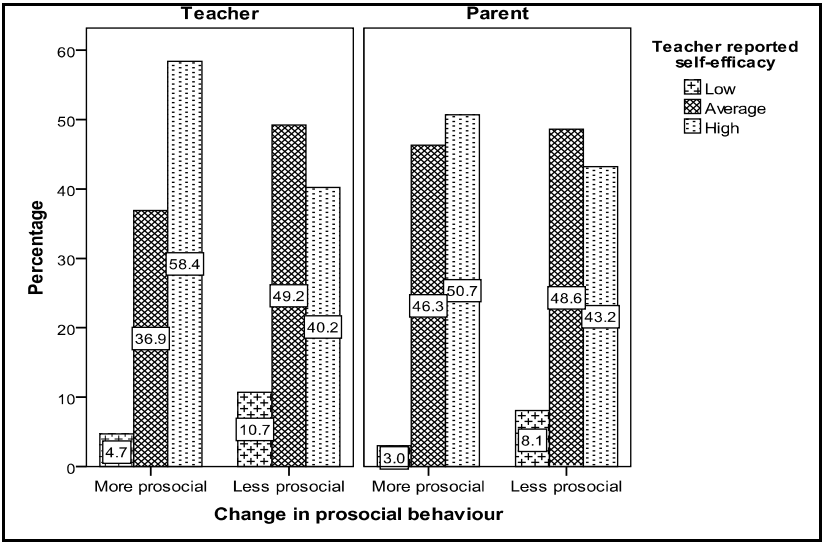

Figure 6.6: Change in prosocial behaviour by teacher-reported self-efficacy

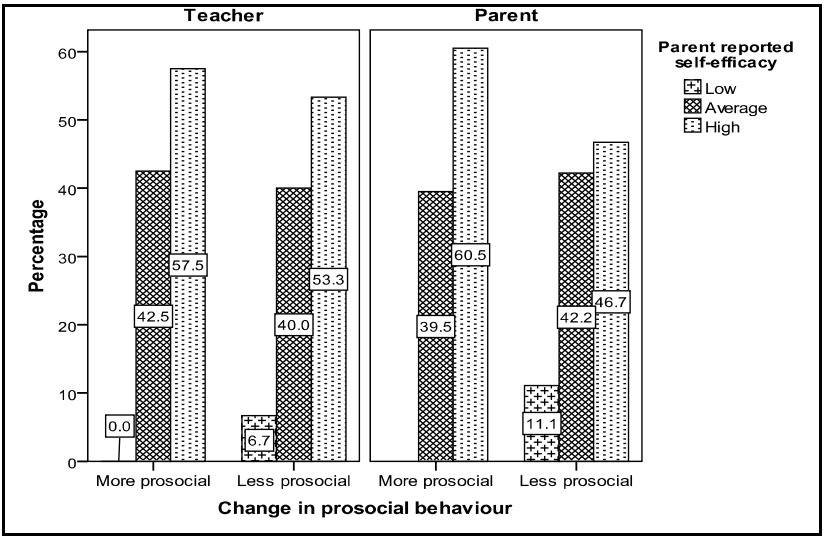

Figure 6.7: Change in prosocial behaviour by parent-reported self-efficacy

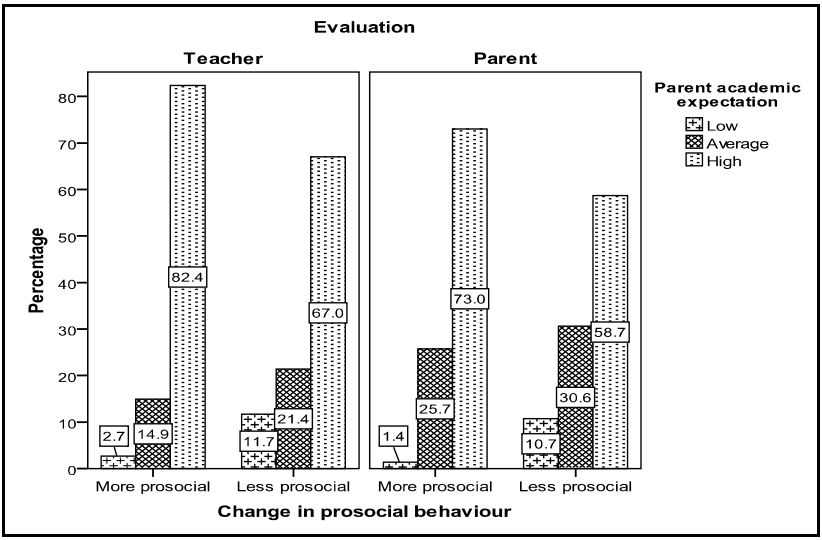

Figure 6.8: Change in prosocial behaviour by parental academic expectation

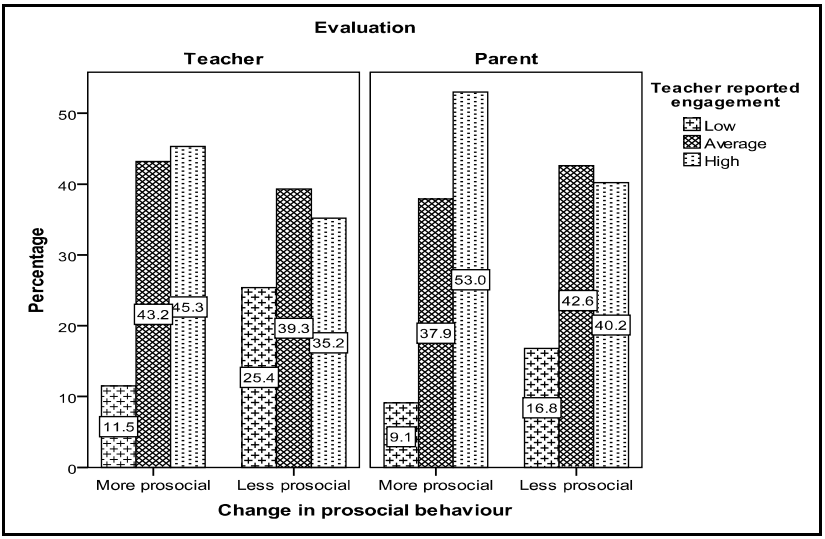

Figure 6.9: Change in prosocial behaviour by teacher-reported pupil's engagement

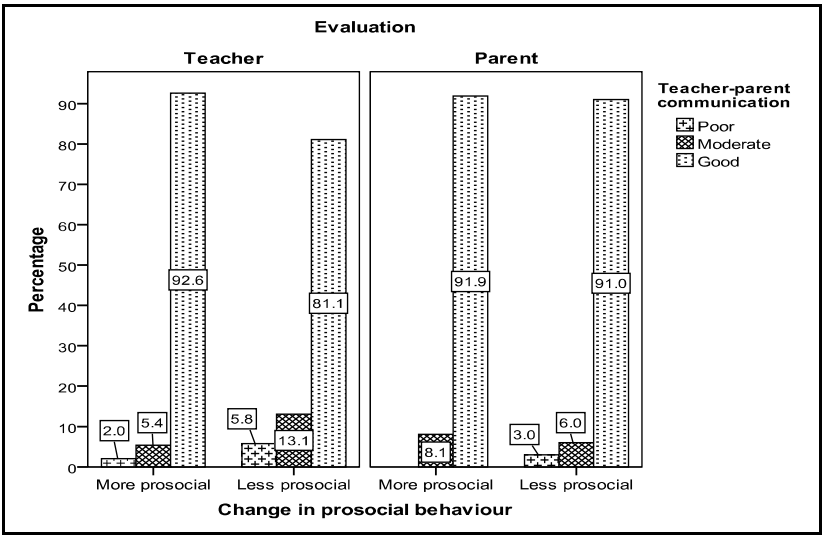

Figure 6.10: Change in prosocial behaviour by teacher-parent communication

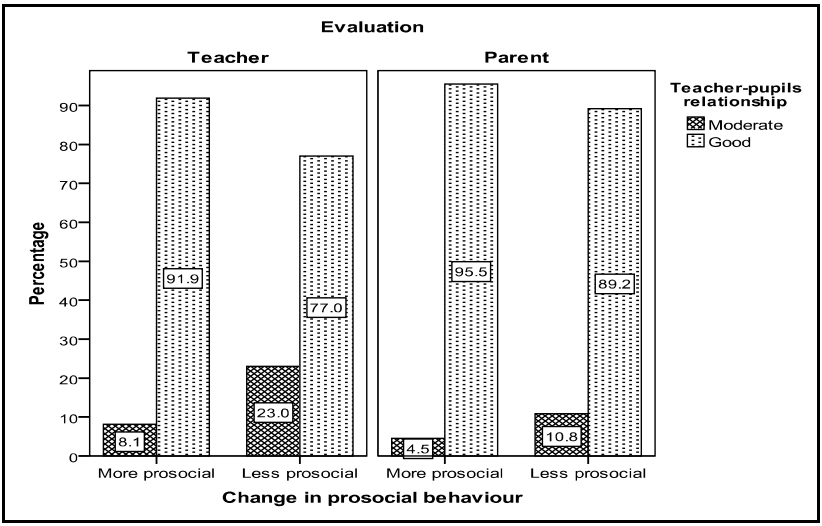

Figure 6.11: Change in prosocial behaviour by teacher-pupils relationship

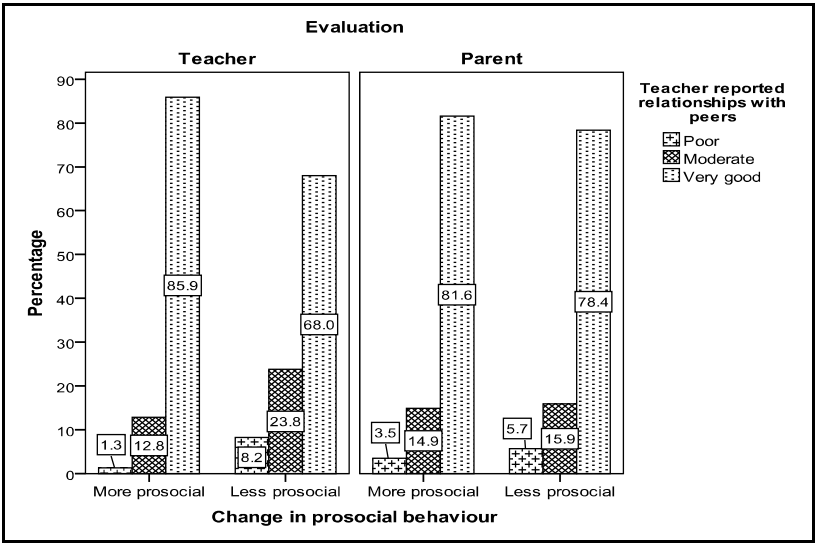

Figure 6.12: Change in prosocial behaviour by teacher-reported pupil's relationship with peers

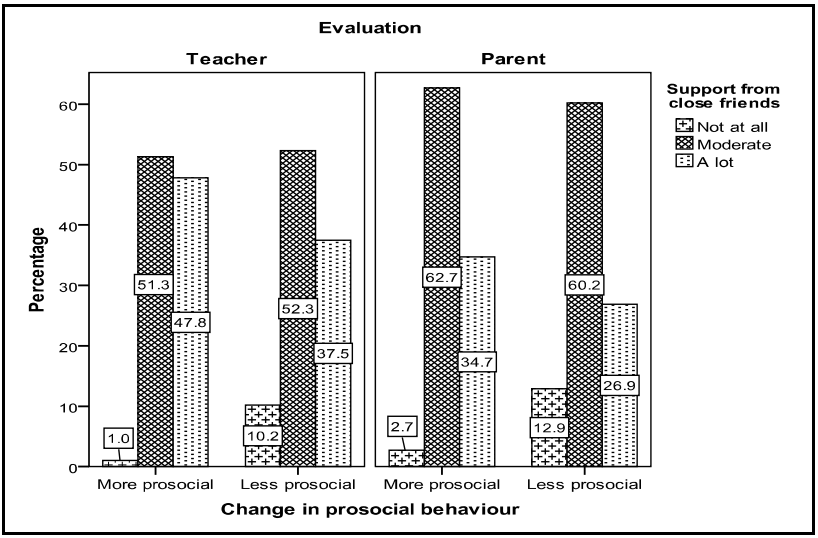

Figure 6.13: Change in prosocial behaviour by pupil's support from close friends

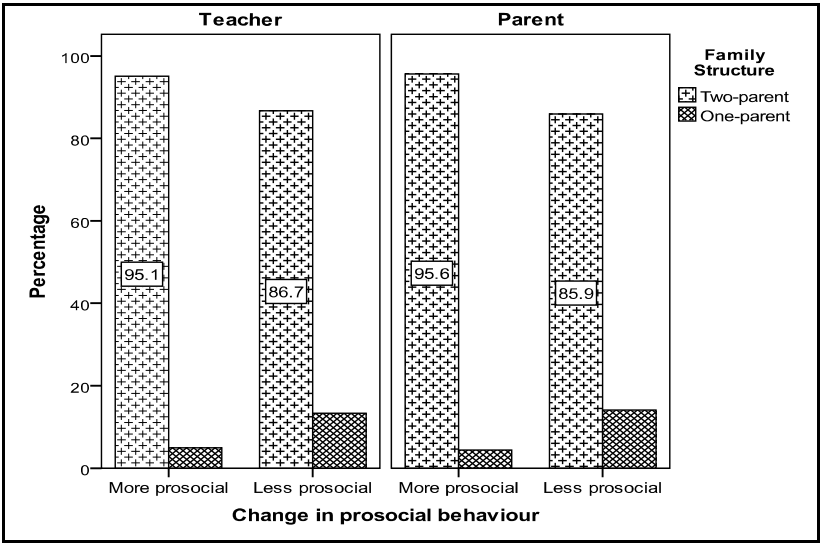

Figure 6.14: Change in prosocial behaviour by family structure

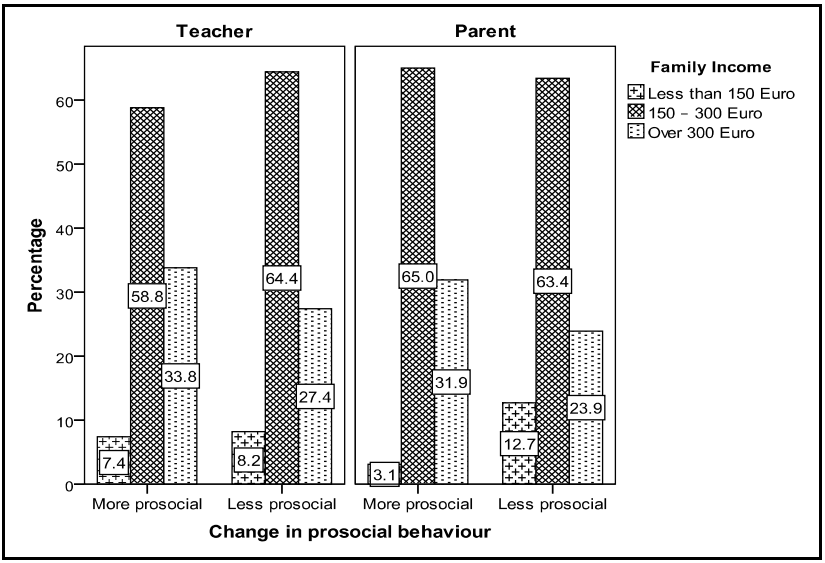

Figure 6.15: Change in prosocial behaviour by family income

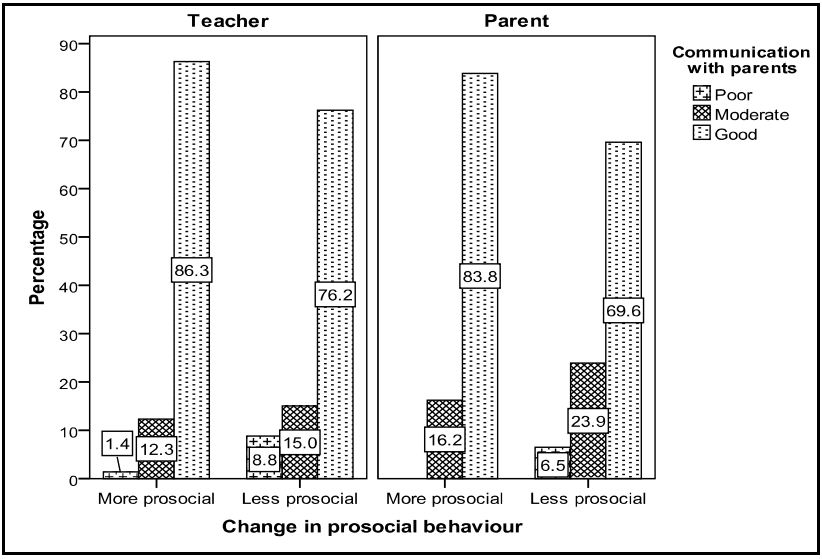

Figure 6.16: Change in prosocial behaviour by pupil's communication with parents

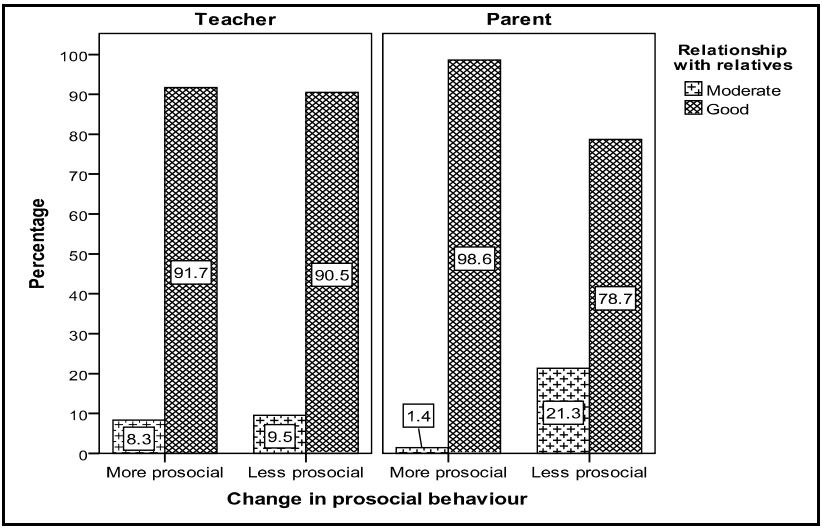

Figure 6.17: Change in prosocial behaviour by pupil's relationship with relatives

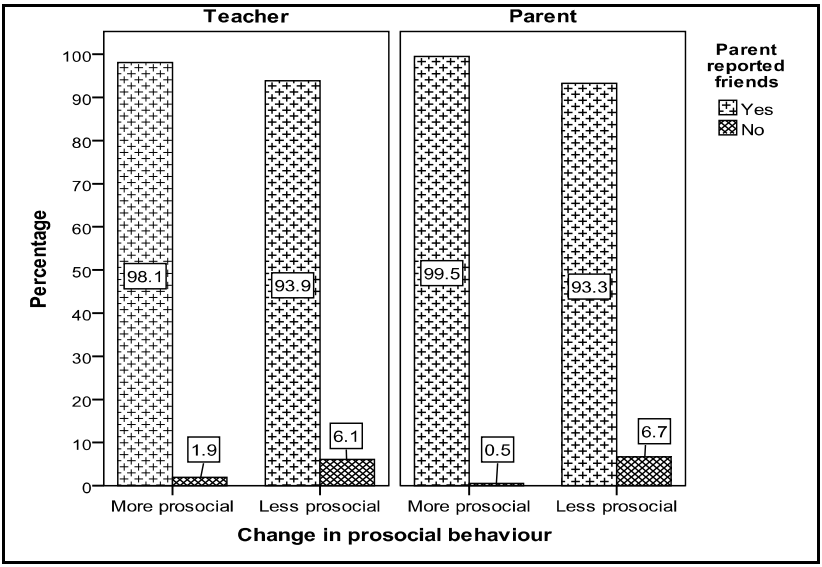

Figure 6.18: Change in prosocial behaviour by parent-reported pupil's friends

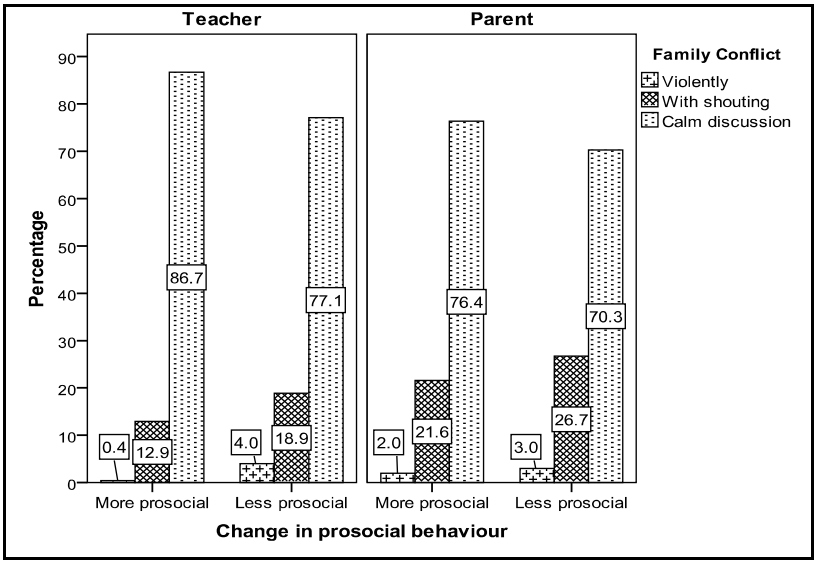

Figure 6.19: Change in prosocial behaviour by family conflict

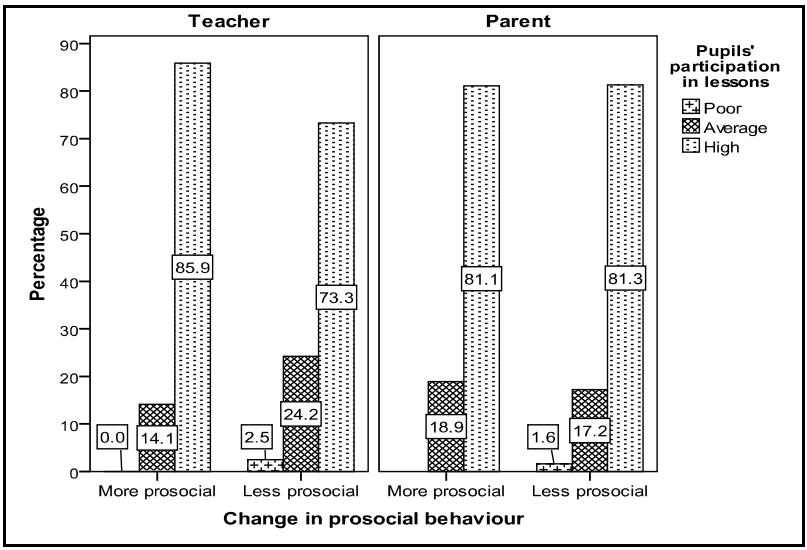

Figure 6.20: Change in prosocial behaviour by pupils' classroom participation in lessons

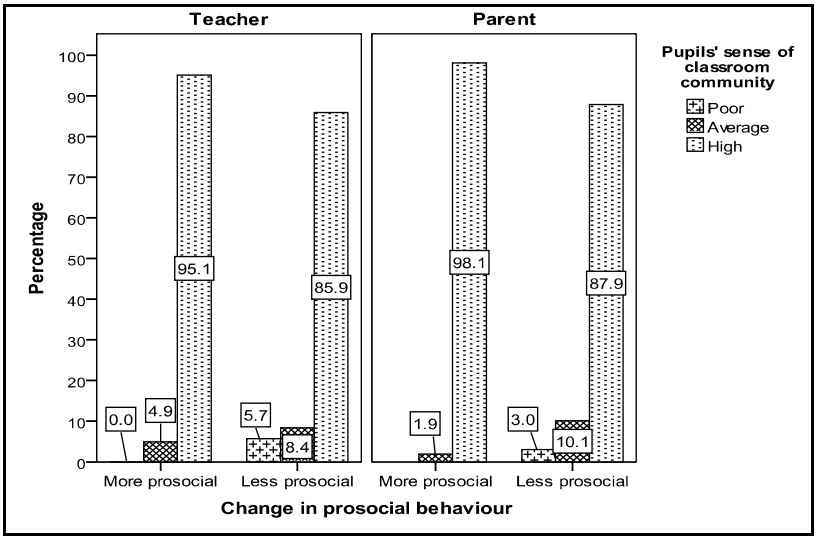

Figure 6.21: Change in prosocial behaviour by pupils' sense of classroom community

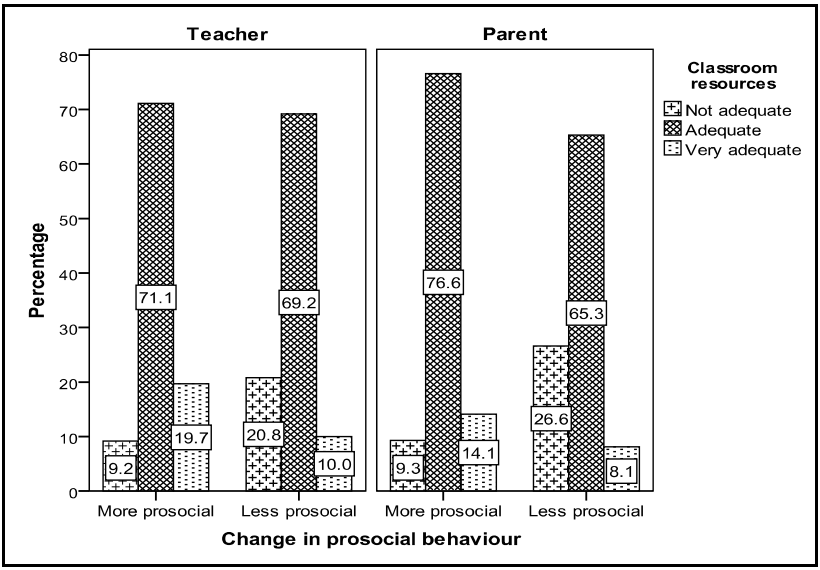

Figure 6.22: Change in prosocial behaviour by classroom resources

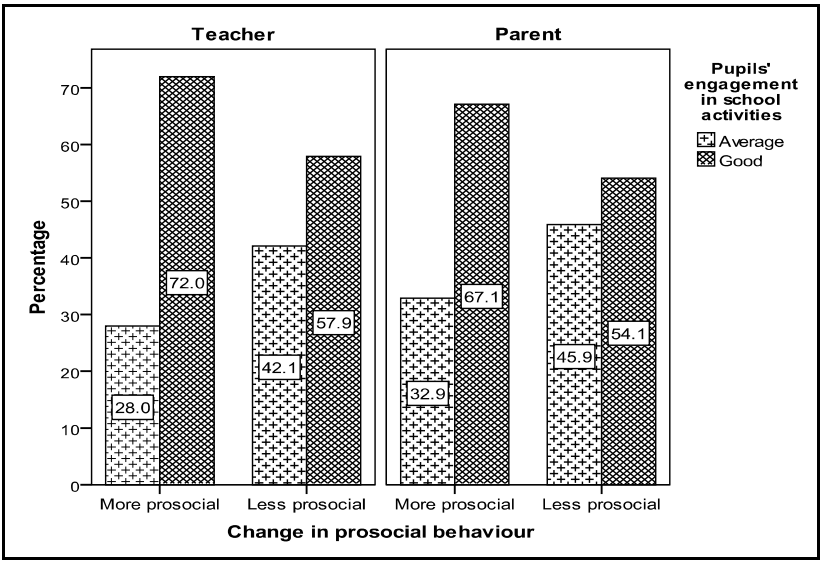

Figure 6.23: Change in prosocial behaviour by pupils' engagement in school activities

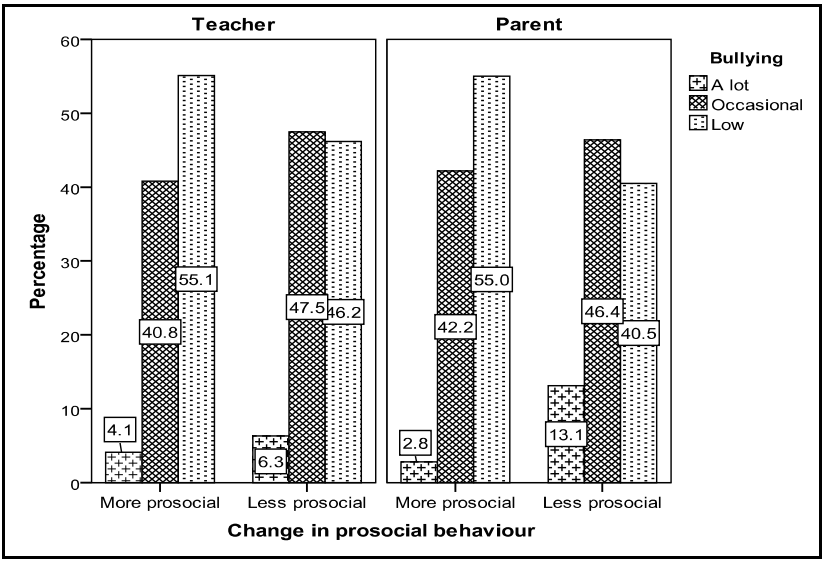

Figure 6.24: Change in prosocial behaviour by school bullying

7 Risk and Promotive Factors Trajectory

This chapter maps the trajectory of pupils' behaviour by grouping them into either a risk or promotive group and then examining which of the various variables predict either a positive trajectory or a negative one. Using both the total difficulty and prosocial scores provided by teachers and parents when pupils were in Year 1 and then again in Year 4, it was possible to identify a positive or negative behavioural change over time, and group the pupils accordingly. Pupils who scored higher in total difficulty but lower in prosocial behaviour from Year 1 and Year 4 were clustered into the risk group. Those who scored lower in total difficulty but higher in prosocial behaviour between Year 1 and Year 4 were put in the promotive group. Pupils who did not show a clear pathway, namely those who scored higher in both total difficulty and in prosocial behaviour or vice-versa, thus showing conflicting patterns, and those who displayed no change in behaviour, were excluded from this analysis. Table 7.1 illustrates the percentage of pupils who were excluded from the study or who were assigned to the promotive or risk groups using both the teachers' and parents' evaluations. Teachers' evaluations indicate a higher proportion of pupils (38.3%) in the risk group; whereas parents assigned a higher proportion of pupils (37.8%) in the promotive group. Approximately 31% of the pupils in the sample were excluded from the study in both teachers' and parents' evaluations.

Table 7.1: Percentage of pupils by type of group

Group	Teachers' Evaluation	Parents' Evaluation
Promotive	30.3%	37.8%
Risk	38.3%	30.6%
Excluded from study	31.4%	31.6%

The following sections describe how the positive or negative changes in pupils' behaviour are related to the various individual, classroom, school, home and community factors explored in this study. As in the previous chapters, the variables have been grouped in three main sets, namely individual, whole class and whole school variables. The analysis makes use of univariate logistic regression to examine the association between the likelihood of a pupil's positive/negative change in behaviour and individual, classroom, school, home and community variables. The odds ratios and their corresponding 95% confidence intervals are provided only for the significant predictors.

7.1 Individual variables

7.1.1 Individual characteristics variables

Table 7.2 presents the percentage of pupils in the risk and promotive groups over the three year period classified by individual characteristics variables, making use of both teachers' and parents' evaluations. Significant percentage differences representing strong associations between the groups and the predictors are marked bold. Table 7.3 presents the odds ratio and corresponding 95% confidence intervals which are computed for the significant predictors using Univariate Logistic Regression Analysis.

According to teachers' and parents' evaluations, pupils' self-esteem, self-efficacy and communication skills are among the best predictors that discriminate between the two groups.

Table 7.2: Risk and promotive groups by individual characteristics variables

Individual variables (Characteristics)		Teacher evaluation		Parent evaluation	
		Promotive Group	Risk Group	Promotive Group	Risk Group
Gender	Male	48.6%	37.6%	**31.5%**	**55.9%**
	Female	51.4%	62.4%	**68.5%**	**44.1%**
Language	Maltese	92.4%	96.1%	91.0%	92.2%
	English/other	7.6%	3.9%	9.0%	7.8%
Locality	North harbour	19.2%	23.8%	25.0%	26.8%
	South harbour	15.1%	25.0%	12.5%	17.9%
	South Eastern	15.1%	16.7%	14.1%	12.9%
	Western	20.5%	16.7%	15.3%	16.1%
	Northern	19.2%	14.3%	20.8%	16.1%
	Gozo	11.0%	3.6%	12.3%	10.3%
Illness or disability	Yes	7.2%	9.3%	9.9%	13.8%
	No	92.8%	90.7%	90.1%	86.2%
Medication or therapy	Yes	6.0%	9.3%	8.5%	15.5%
	No	94.0%	90.7%	91.5%	84.5%
Communication	Poor	**1.9%**	**7.8%**	**4.5%**	**14.9%**
	Adequate	**17.1%**	**25.6%**	**16.4%**	**18.5%**
	Very good	**81.0%**	**66.7%**	**79.1%**	**66.6%**
Teacher reported self-esteem	Low	**1.9%**	**10.9%**	3.0%	2.0%
	Average	**30.5%**	**33.3%**	25.4%	43.1%
	High	**67.6%**	**55.8%**	71.6%	54.9%
Parent reported self-esteem	Low	1.4%	2.4%	**0.0%**	**8.4%**
	Average	26.4%	32.5%	**31.0%**	**37.5%**
	High	72.2%	65.1%	**69.0%**	**54.1%**
Teacher reported self-efficacy	Low	**4.8%**	**12.4%**	4.5%	2.0%
	Average	**33.3%**	**42.6%**	35.8%	49.0%
	High	**61.9%**	**45.0%**	59.7%	49.0%
Parent reported self-efficacy	Low	**0.0%**	**6.8%**	**0.0%**	**7.1%**
	Average	**45.8%**	**37.8%**	**39.4%**	**50.0%**
	High	**54.2%**	**55.4%**	**60.6%**	**42.9%**

Teachers' evaluations suggest that the estimated odds ratio that pupils with high self-esteem will be in the promotive group is 3.903 times than pupils with poor self-esteem; according to parents,

the estimated odds ratio is 3.745 and in the same direction. Similarly according to teachers, the estimated odds that pupils with high self-efficacy will be in the promotive group is 3.586 times (teacher-reported) and 3.107 (parent-reported) the estimated odds of pupils with low self-efficacy; according to parents, the estimated odds ratio is 3.011 in the same direction. Parents' evaluations also show that boys are more likely to be found in the risk group and girls in the promotive group. Teachers' evaluations suggest an opposite trend but the finding is not significant. There are also some indications, though the results are not significant, that pupils from particular regions such as the Harbour area, pupils with disability or illness and who receive medication or therapy are more likely to be in the risk group.

Table 7.3: Odds ratio of significant individual characteristics variables

Teachers' Evaluation				
Predictor	**Chi Square**	**P-value**	**Odds ratio**	**95% Conf. Int.**
Teacher reported self-esteem	9.284	0.010	3.903	(2.73 – 5.57)
Teacher reported self-efficacy	8.474	0.014	3.586	(2.72 – 4.73)
Parent reported self-efficacy	8.122	0.017	3.107	(2.31 – 4.19)
Communication	7.840	0.020	2.867	(2.09 – 3.93)
Parents' Evaluation				
Gender	8.018	0.005	3.612	(2.56 – 5.09)
Parent reported self-esteem	10.59	0.005	3.745	(2.81 – 4.99)
Parent reported self-efficacy	9.232	0.010	3.011	(2.08 – 4.37)
Communication	6.247	0.044	2.564	(1.75 – 3.76)

7.1.2 Individual classroom and school variables

Table 7.4 presents the percentage of pupils in the risk and promotive groups by individual classroom and school variables. Table 7.5 presents the odds ratio computed for the significant predictors by both teachers' and parents' evaluations. Significant percentage differences representing strong associations between the groups and the predictors are marked bold.

Table 7.4: Risk and promotive groups by individual classroom and school variables

Individual variables (Learning)		Teacher evaluation		Parent evaluation	
		Promotive Group	Risk Group	Promotive Group	Risk Group
Teacher reported academic progress	Poor	16.2%	19.5%	9.0%	15.7%
	Average	23.8%	31.3%	22.4%	29.4%
	Very good	60.0%	49.2%	68.7%	54.9%
Pupil reported academic progress	Poor	**2.2%**	**11.7%**	4.5%	11.9%
	Average	**46.7%**	**43.3%**	43.3%	41.9%
	Very good	**51.1%**	**45.0%**	52.2%	46.3%
Teacher academic expectation	Poor	10.5%	13.3%	6.0%	11.8%
	Moderate	28.6%	32.0%	22.4%	31.4%
	Good	61.0%	54.7%	71.6%	56.9%
Parental academic expectation	Poor	4.1%	3.6%	**1.4%**	**8.8%**
	Moderate	23.0%	25.0%	**12.7%**	**36.8%**
	Good	73.0%	71.4%	**85.9%**	**54.4%**
Learning difficulties	Many	**3.3%**	**12.2%**	**3.0%**	**13.0%**
	Some	**46.0%**	**47.0%**	**53.7%**	**52.3%**
	None	**48.7%**	**40.8%**	**43.3%**	**34.7%**
Teacher reported learning support	Yes	14.3%	10.9%	11.9%	9.8%
	No	85.7%	89.1%	88.1%	90.2%
Pupil-reported learning support	Not much	14.4%	15.8%	9.0%	9.4%
	Moderate	40.2%	39.2%	38.8%	37.7%
	A lot	45.3%	45.0%	52.2%	52.8%
Peer support with work	Not much	9.2%	13.2%	9.0%	9.3%
	Moderate	44.5%	41.8%	35.8%	51.9%
	A lot	46.2%	45.1%	55.2%	38.9%
Support with homework	Not much	34.5%	39.2%	24.6%	38.0%
	Moderate	35.7%	39.2%	35.1%	35.2%
	A lot	29.8%	21.6%	40.4%	26.8%
Repeating year	Yes	1.6%	3.8%	0.0%	3.0%
	No	98.4%	96.2%	100.0%	97.0%
Teacher reported engagement	Low	**12.5%**	**22.5%**	**5.0%**	**9.8%**
	Average	**34.6%**	**39.5%**	**30.8%**	**49.0%**
	High	**52.9%**	**38.0%**	**64.2%**	**41.2%**
Pupil reported engagement	Low	**2.6%**	**13.8%**	3.0%	9.3%
	Average	**45.0%**	**41.7%**	43.3%	44.4%
	High	**52.4%**	**44.5%**	53.7%	46.3%

Attendance	Regular	96.2%	94.5%	98.5%	96.1%
	Irregular	3.8%	5.5%	1.5%	3.9%
Teacher-parent communication	Poor	**1.0%**	**6.2%**	1.5%	2.0%
	Moderate	**6.7%**	**23.3%**	6.1%	9.8%
	Good	**92.4%**	**70.5%**	92.4%	88.2%
Parent-school communication	Moderate	25.0%	25.7%	21.1%	35.1%
	Good	75.0%	74.3%	78.9%	64.9%
Teacher-pupil relationship	Moderate	**4.8%**	**24.0%**	**6.0%**	**17.6%**
	Very good	**95.2%**	**76.0%**	**94.0%**	**82.4%**
Pupil-teacher relationship	Poor	5.6%	10.0%	6.0%	9.8%
	Moderate	32.2%	28.3%	22.4%	23.5%
	Very good	62.2%	61.7%	71.6%	66.7%
Teacher reported relationship with peers	Poor	**0.0%**	**7.8%**	1.5%	2.0%
	Moderate	**11.4%**	**27.3%**	11.9%	18.0%
	Very good	**88.6%**	**64.8%**	86.6%	80.0%
Pupil reported relationship with peers	Poor	5.6%	8.3%	**1.5%**	**10.4%**
	Moderate	27.8%	28.3%	**23.3%**	**26.2%**
	Very good	66.7%	63.3%	**75.2%**	**63.4%**
Friends at school	Yes	**98.1%**	**90.7%**	98.0%	97.0%
	No	**1.9%**	**9.3%**	2.0%	3.0%
Close friends at school	Yes	98.6%	95.8%	98.5%	96.3%
	No	1.4%	4.2%	1.5%	3.7%
Support from close friends	Not at all	1.4%	3.6%	**0.0%**	**7.3%**
	Moderate	52.2%	53.0%	**46.4%**	**67.3%**
	A lot	46.5%	43.4%	**53.6%**	**25.5%**
Pupil plays with peers	Not much	1.1%	4.2%	0.0%	3.7%
	Moderate	12.4%	10.8%	9.0%	11.1%
	A lot	86.5%	85.0%	91.0%	85.2%

Teachers underline classroom relationships as the strongest predictors distinguishing the risk from the promotive groups, with peer, teacher-parent and teacher-pupils relationships being the three strongest predictors. These are followed by four learning-related predictors (engagement, academic progress and learning problems). Parents' evaluations on the other hand, provide a less uniform portrait with the first three predictors underlining parental expectations, support from friends and learning difficulties respectively. Taken together, however, these findings suggest that pupils are more likely to find themselves in the promotive group if

they enjoy healthy relationships with their teacher and peers, are actively engaged and supported in their learning by their teacher, peers and parents, are making good academic progress, and have parents who expect them to do well and communicate well with their teachers. Other learning-related factors such as homework support, attendance and repeating a year, may also distinguish between the risk and promotive groups, but the relationships are not significant.

Table 7.5: Odds ratio of significant individual classroom and school variables

Predictor	Chi Square	P-value	Odds ratio	95% Conf. Int.
Teachers' Evaluation				
Relationship with peers	23.91	0.000	4.923	(3.45 – 7.03)
Teacher-parent communication	19.32	0.000	4.423	(2.99 – 6.54)
Teacher-pupil relationship	18.45	0.000	4.025	(2.99 – 5.42)
Pupil reported engagement	7.726	0.021	3.256	(2.14 – 4.96)
Pupils' academic progress	7.545	0.023	3.104	(2.23 – 4.31)
Teacher reported engagement	6.488	0.039	2.873	(1.91 – 4.31)
Learning difficulties	6.115	0.047	2.543	(1.72 – 3.74)
Pupil has friends at school	4.709	0.030	1.829	(1.33 – 2.51)
Parents' Evaluation				
Parental academic expectation	16.28	0.000	4.217	(2.79 – 6.37)
Support from close friends	15.08	0.001	3.863	(2.64 – 5.66)
Learning difficulties	7.081	0.029	3.077	(2.19 – 4.33)
Teacher reported engagement	6.763	0.034	2.744	(1.99 – 3.78)
Relationship with peers	6.540	0.038	2.459	(1.61 – 3.75)
Teacher-pupil relationship	4.026	0.045	1.526	(1.02 – 2.29)

According to teachers' evaluations:

- Pupils with a good relationship with their peers are 4.923 times more likely to be in the promotive group than pupils who have poor relationships; according to parents' evaluations, the odds ratio is 2.459;
- Pupils whose teacher and parents communicate well together, are 4.423 times more likely to be in the promotive group than pupils with poor teacher-parent communication;

- Pupils with good relationship with their teachers are 4.025 times more likely to be in the promotive group than pupils who have poor relationships; according to parents' evaluations, the odds ratio is 1.526;
- Pupils who are engaged in the learning process are 3.265 times more likely to be in the promotive group over time than less engaged peers; according to parents' evaluations, the odds ratio is 2.744;
- Pupils making good academic progress are 3.104 times more likely to be in the promotive group than peers who make poor progress;
- Pupils experiencing learning difficulties are 2.543 times more likely to be in the risk group over time than peers without such difficulties; according to parents' evaluations, the odds ratio is 3.077;
- Pupils who have friends at school are 1.829 times more likely to be in the promotive group than pupils without friends.

According to parents' evaluations:

- Pupils whose parents hold high academic expectations for them are 4.217 times more likely to be in the promotive group than pupils of parents with lower expectations;
- Pupils who have support from friends are 3.863 time more likely to be in the promotive group than less supported peers.

7.1.3 Individual home and community variables

Table 7.6 presents the percentage of pupils in the risk and promotive groups categorized by individual, home and community variables, while Table 7.7 presents the odds ratios and corresponding 95% confidence intervals computed for the significant regressors. Significant percentage differences representing strong associations between the groups and the predictors are marked bold.

Table 7.6: Risk and promotive groups by individual home and community variables

Individual variables (Home)		Teacher evaluation		Parent evaluation	
		Promotive Group	Risk Group	Promotive Group	Risk Group
Family Structure	Two parent	**95.1%**	**84.5%**	**93.2%**	**83.1%**
	One parent	**4.9%**	**15.5%**	**6.8%**	**16.9%**
Family Size	1 child	18.4%	23.7%	16.4%	18.6%
	2 children	52.9%	44.7%	54.8%	49.2%
	3 children	18.4%	21.1%	20.5%	20.3%
	4 or more	10.3%	10.5%	8.2%	11.8%
Father Occupation	Professional	32.8%	30.0%	33.8%	26.9%
	Technical	25.0%	21.9%	28.6%	28.8%
	Semi Skilled	37.5%	39.0%	36.0%	36.5%
	State income	4.7%	9.1%	1.5%	7.7%
Mother Occupation	Professional	18.1%	27.5%	19.4%	25.5%
	Technical	7.2%	8.7%	9.7%	18.2%
	Semi Skilled	10.8%	8.7%	5.6%	9.1%
	House carer	63.9%	55.1%	65.3%	47.3%
Father Education	Primary	2.9%	2.5%	**2.4%**	**5.7%**
	Secondary	54.3%	51.9%	**43.2%**	**54.4%**
	Post secondary	21.4%	25.3%	**22.0%**	**29.6%**
	Tertiary	21.4%	20.3%	**32.4%**	**9.3%**
Mother Education	Primary	2.3%	2.6%	0.8%	3.7%
	Secondary	59.8%	64.5%	56.2%	59.3%
	Post secondary	17.2%	14.5%	20.5%	18.4%
	Tertiary	20.7%	18.4%	22.5%	18.6%
Family Income	Less 150 Euro	**4.9%**	**14.3%**	**1.0%**	**12.3%**
	150 – 300 Euro	**52.1%**	**55.1%**	**58.2%**	**62.9%**
	Over 300 Euro	**44.0%**	**30.6%**	**40.8%**	**34.8%**
Family Time	Little	**1.5%**	**10.4%**	**1.4%**	**10.2%**
	Average	**48.8%**	**54.1%**	**59.2%**	**57.2%**
	A lot	**49.7%**	**35.5%**	**39.4%**	**32.6%**
Behaviour at home	Poor	**1.3%**	**10.4%**	**0.0%**	**5.3%**
	Moderate	**29.4%**	**30.5%**	**20.0%**	**35.1%**
	Good	**69.3%**	**59.1%**	**80.0%**	**59.6%**
Communication with parents	Poor	**1.4%**	**7.2%**	**0.0%**	**3.5%**
	Moderate	**13.9%**	**19.5%**	**7.1%**	**22.8%**
	Good	**84.7%**	**73.3%**	**92.9%**	**73.7%**

Relationship with siblings	Poor	**1.8%**	**8.0%**	1.7%	8.5%
	Moderate	**19.3%**	**28.9%**	25.9%	27.7%
	Good	**78.9%**	**63.1%**	72.4%	63.8%
Relationship with relatives	Moderate	4.1%	7.3%	**2.9%**	**19.0%**
	Good	95.9%	92.7%	**97.1%**	**81.0%**
Parent reported friends	Yes	98.6%	97.6%	98.6%	93.0%
	No	1.4%	2.4%	1.4%	7.0%
Membership in organization	Yes	72.7%	71.8%	85.0%	75.0%
	No	27.3%	28.2%	15.0%	25.0%
Participation in organization	Poor	5.3%	9.9%	1.6%	8.3%
	Moderate	15.7%	12.2%	9.5%	14.6%
	Regular	79.0%	77.9%	88.9%	77.1%
Family Cohesion	Little	2.7%	5.2%	**0.2%**	**2.1%**
	Average	12.2%	22.4%	**18.1%**	**30.1%**
	A lot	85.1%	72.4%	**81.7%**	**67.8%**
Family Conflict	With shouting	**12.9%**	**24.9%**	17.4%	25.9%
	Discussion	**87.1%**	**75.1%**	82.6%	74.1%
Parenting Stress	Very stressed	**11.3%**	**20.6%**	**15.5%**	**30.5%**
	Slightly stressed	**70.0%**	**72.1%**	**63.4%**	**62.7%**
	Not stressed	**18.7%**	**7.3%**	**21.1%**	**6.8%**
Parenting Difficulty	Very difficult	51.4%	58.8%	59.2%	71.2%
	Slightly difficult	44.6%	38.8%	36.6%	25.4%
	Not difficult	4.1%	2.4%	4.2%	3.4%
Parental quality time	Moderate	**16.7%**	**30.7%**	**15.7%**	**30.6%**
	A lot	**83.3%**	**70.3%**	**85.3%**	**69.4%**
Parenting supervision	Moderate	**15.7%**	**27.7%**	**14.7%**	**33.3%**
	A lot	**84.3%**	**72.3%**	**85.3%**	**66.7%**
Parenting strategies	Discipline	23.5%	29.4%	**12.0%**	**28.8%**
	Punishment	5.5%	14.0%	**8.2%**	**16.2%**
	Rewards	25.5%	20.2%	**27.7%**	**18.9%**
	Persuasion	22.9%	19.0%	**28.3%**	**18.9%**
	Discussion	22.6%	17.2%	**23.8%**	**17.1%**
Neighbourhood Safety	Not safe	8.1%	9.3%	7.0%	15.3%
	Moderately safe	58.1%	62.7%	59.2%	54.2%
	Very safe	33.7%	28.0%	33.8%	30.5%
Neighbourhood Support	Not helpful	21.3%	26.7%	29.6%	37.9%
	Slightly helpful	49.3%	46.5%	42.3%	43.1%
	Very helpful	29.3%	26.7%	28.2%	19.0%

Teachers' and parents' evaluations underline similar key predictors differentiating between the risk and promotive groups, such as family structure, parenting stress, family and parental quality time and supervision, child's relationships with parents, child's behaviour at home and family income. The ranking of the variables however, differ considerably. Teachers' evaluations again underline family structure as the top predictor differentiating the two groups. Parenting stress, family and parental quality time, and family conflict, as well as the child's behaviour at home and relationships with siblings, are other important key predictors. On the other hand, father education features as the top predictor according to parents' evaluations, indicating that the father's tertiary education is a key promotive factor. Together with family income, parents' evaluations indicate that SES is a key predictor in differentiating between the two groups. The child's relationships with relatives and parents and parental supervision and parenting strategies are other top predictors according to the parents' evaluations. The overall picture suggests that the most discriminating predictors are factors related to family structure, family time, parenting quality and stress, SES, the child's behaviour at home and the type of relationships s/he has with the other family members. On the other hand, community factors such as participation in organisations and neighbourhood safety/support were not found to be good predictors of children's behaviour.

According to teachers' and parents' evaluations:

- A child living in a two-parent family is 4.231 and 1.621 times respectively more likely to be in the promotive group over time than a child living in a single-parent family;
- A child whose parents provide good quality time is 2.615 and 3.214 times respectively more likely to be in the promotive group than a child whose parents provide little time for their children;
- A child who has good communication with parents is 2.190 and 3.264 times respectively more likely to be in the promotive group over time than a child who has difficulty communicating with parents;

- A child living in a family with low levels of parenting stress is 3.846 and 2.036 times respectively more likely to be in the promotive group than a child whose parents are highly stressed;
- A well-behaved child at home is respectively 2.936 and 2.873 times more likely to be in the promotive group than a child with home behaviour problems;
- A child living in a family with good income is 1.871 and 3.876 times respectively more likely to be in the promotive group over time than a child living in poverty;
- A child from a family that provides adequate time for its members is 3.244 and 2.542 times respectively more likely to be in the promotive group than a child from a family with little time for its members;
- A child who is well supervised by parents is 1.523 and 4.763 times more likely to be in the promotive group than poorly supervised children.

According to parents' evaluation:

- A child whose father has a tertiary level of education is 4.819 times more likely to be in the promotive group than a child whose father has a low level of education;
- A child whose parents make use of positive parenting strategies is 4.529 times more likely to be in the promotive group than a child brought up with a punitive parenting style;
- A child who has a good relationship with relatives is 3.456 times more likely to be in the promotive group over time than a child with poor relationships;
- A child coming from a cohesive family is 1.492 times more likely to be in the promotive group than peers coming from less cohesive families.

According to teachers' evaluation, a child coming from a family which resolves conflicts constructively is 2.003 times more likely to be in the promotive group than a child coming from more violent families.

Table 7.7: Odds ratio of significant individual home and community variables

Predictor	Chi Square	P-value	Odds ratio	95% Conf. Int.
Teachers' Evaluation				
Family structure	6.311	0.012	4.231	(2.38 – 7.51)
Parenting stress	8.686	0.013	3.846	(2.07 – 7.16)
Behaviour at home	8.149	0.017	2.936	(2.23 – 3.87)
Family time	7.824	0.020	3.244	(2.02 – 5.20)
Parental quality time	5.168	0.023	2.615	(1.54 – 4.45)
Relationship with siblings	7.459	0.024	2.569	(1.82 – 3.62)
Family conflict	4.653	0.031	2.003	(1.23 – 3.26)
Family income	6.594	0.037	1.871	(1.13 – 3.09)
Communication with parents	6.488	0.039	2.190	(1.64 – 2.92)
Parental supervision	4.176	0.041	1.523	(1.02 – 2.27)
Parents' Evaluation				
Father education	16.27	0.001	4.819	(3.23 – 7.19)
Relationship with relatives	9.589	0.002	3.456	(2.38 – 5.01)
Parental supervision	8.807	0.003	4.763	(3.11 – 7.31)
Parenting strategies	14.45	0.006	4.529	(3.02 – 6.80)
Communication with parents	10.11	0.006	3.264	(2.21 – 4.83)
Family income	9.421	0.009	3.876	(2.38 – 6.31)
Behaviour at home	9.323	0.009	2.873	(2.07 – 3.99)
Parental quality time	6.465	0.011	3.214	(2.13 – 4.86)
Family time	7.927	0.019	2.542	(1.64 – 3.95)
Parenting stress	7.824	0.020	2.036	(1.34 – 3.10)
Family Structure	4.709	0.030	1.621	(1.11 – 2.37)
Family cohesion	6.293	0.043	1.492	(1.07 – 2.08)

7.2 Whole classroom variables

Table 7.8 presents the percentage of pupils in the risk and promotive groups by whole classroom variables, making use of both teachers' and parents' evaluations, while Table 7.9 presents the odds ratio computed for the significant predictors. Significant percentage differences representing strong associations between the groups and the predictors are marked bold.

Table 7.8: Risk and promotive groups by whole classroom variables

Classroom variables		Teacher evaluation		Parent evaluation	
		Promotive Group	Risk Group	Promotive Group	Risk Group
Pupils' participation during lessons	Poor	**0.0%**	**9.3%**	**0.0%**	**12.0%**
	Average	**13.7%**	**11.5%**	**15.6%**	**17.6%**
	High	**86.3%**	**77.2%**	**84.4%**	**70.4%**
Pupils' involvement in decision taking	Poor	5.9%	9.4%	5.9%	6.3%
	Average	52.9%	54.3%	49.0%	59.4%
	High	41.2%	36.2%	45.1%	34.4%
Pupils' collaboration in learning	Poor	**1.0%**	**9.1%**	2.0%	8.0%
	Average	**28.4%**	**26.3%**	24.6%	27.5%
	High	**70.6%**	**64.6%**	73.4%	64.5%
Pupils' behaviour during play	Poor	3.9%	10.4%	1.3%	5.8%
	Average	39.2%	42.0%	45.8%	47.3%
	Good	56.9%	45.7%	52.9%	46.9%
Pupils' sense of classroom community	Poor	**0.0%**	**4.6%**	**0.0%**	**10.2%**
	Average	**2.0%**	**7.3%**	**5.9%**	**11.3%**
	High	**98.0%**	**88.1%**	**94.1%**	**78.5%**
Classroom resources	Not adequate	10.8%	21.9%	9.8%	10.9%
	Adequate	74.5%	66.4%	72.5%	81.3%
	Very adequate	14.7%	11.7%	17.6%	7.8%
Teachers' training	Adequate	59.4%	53.9%	57.8%	60.0%
	Very good	40.6%	46.1%	42.2%	40.0%

Pupils' participation and collaboration in the classroom activities as well as their sense of classroom community are the key whole classroom predictors which distinguish the promotive from the risk group. According to teachers' and parents' evaluations, pupils attending classrooms where pupils are actively engaged in the learning process are 3.016 and 3.569 times respectively more likely to be in the promotive group than less engaged peers. Similarly pupils attending classrooms with a strong sense of community are 2.597 and 3.418 times respectively more likely to be in the promotive group than peers with a poor sense of community. Factors such as teacher training, play, and pupils' involvement in decision making did not feature as significant whole classroom predictors.

Table 7.9: Odds ratio of significant whole classroom variables

Teachers' Evaluation				
Predictor	**Chi Square**	**P-value**	**Odds ratio**	**95% Conf. Int.**
Participation during lessons	9.657	0.008	3.016	(2.05 – 4.44)
Sense of classroom community	8.270	0.016	2.597	(1.72 – 3.92)
Pupils' collaboration in learning	6.763	0.034	1.754	(1.25 – 2.47)
Parents' Evaluation				
Participation during lessons	13.82	0.001	3.569	(2.59 – 4.92)
Sense of classroom community	12.43	0.002	3.418	(2.39 – 4.88)

7.3 Whole school variables

Table 7.10 presents the percentage of pupils in the risk and promotive groups by whole school variables, while Table 7.11 presents the odds ratio computed for the significant predictors.

Table 7.10: Risk and promotive groups by whole school variables

School variables		Teacher evaluation		Parent evaluation	
		Promotive Group	Risk Group	Promotive Group	Risk Group
Pupils' behaviour at school	Average	**26.1%**	**41.4%**	**32.8%**	**53.1%**
	Good	**73.9%**	**58.6%**	**67.2%**	**46.9%**
Pupils' support and collaboration	Average	**48.8%**	**68.0%**	62.7%	68.8%
	Good	**51.2%**	**32.0%**	37.3%	31.3%
Pupils' engagement in school activities	Average	29.4%	41.4%	**21.6%**	**42.2%**
	Good	70.6%	58.6%	**78.4%**	**57.8%**
Pupils' participation in decisions	Poor	39.2%	50.8%	35.3%	48.4%
	Average	54.9%	43.8%	54.9%	46.9%
	Good	5.9%	5.5%	9.8%	4.7%
Bullying	A lot	**5.0%**	**12.8%**	**7.8%**	**8.0%**
	Slight	**44.6%**	**55.0%**	**35.9%**	**60.0%**
	Low	**50.5%**	**32.2%**	**56.3%**	**32.0%**
Staff participation in school activities	Low	0.8%	3.9%	2.0%	1.6%
	Average	46.9%	48.1%	41.2%	48.4%
	High	52.3%	48.0%	56.9%	50.0%

Staff participation in decisions	Low	32.4%	36.7%	42.2%	29.4%
	Average	55.0%	57.0%	48.4%	54.9%
	High	12.6%	6.3%	9.4%	15.7%
Staff teamwork	Low	9.4%	15.7%	7.8%	17.2%
	Average	46.1%	49.0%	37.3%	48.4%
	High	44.5%	35.3%	54.9%	34.4%
Staff support and collegiality	Low	10.2%	16.7%	7.8%	14.1%
	Average	46.1%	50.0%	43.1%	48.4%
	High	43.8%	33.3%	49.0%	37.5%
Administrative support	Low	6.9%	6.3%	2.0%	7.8%
	Average	41.2%	51.6%	45.1%	43.8%
	High	52.0%	42.2%	52.9%	48.4%

Table 7.11: Odds ratio of significant whole school variables

Teachers' Evaluation				
Predictor	**Chi Square**	**P-value**	**Odds ratio**	**95% Conf. Int.**
Pupils' support and collaboration	7.550	0.006	3.555	(2.09 – 6.05)
Bullying	8.846	0.012	3.346	(2.03 – 5.52)
Pupils' behaviour	5.024	0.025	1.894	(1.15 – 3.13)
Parents' Evaluation				
Pupils' behaviour	8.284	0.004	3.894	(2.41 – 6.31)
Engagement in school activities	5.596	0.018	2.654	(1.16 – 6.09)
Bullying	7.151	0.028	3.116	(2.02 – 4.80)

Both teachers' and parents' evaluations clearly indicate that pupils attending schools where bullying and misbehaviour are low are more likely to be found in the promotive group. According to teachers' and parents' evaluations, pupils attending schools where bullying is rare are 3.346 and 3.116 times respectively more likely to be in the promotive group over time than peers attending schools where bullying is more frequent; the corresponding odds ratio for pupils' behaviour at school are 1.894 for teachers and 3.894 for parents. Teachers' evaluations suggest that pupils' support and collaboration is the strongest predictor differentiating the promotive from the risk group; parents' evaluation on the other hand indicate pupils' participation in school activities. Staff relationship, collaboration and administrative support did not emerge as significant predictors, although they are positively related to good pupils' behaviour.

7.4 Conclusion

To identify the dominant factors that predict the likelihood of a pupil being in the risk or protective group, a multivariate logistic regression analysis was carried out for teachers' and parents' evaluations respectively, using solely the explanatory variables that were found to be significant in the univariate analysis. Table 7.12 presents the findings from the teachers' evaluations, while Table 7.13 presents those from the parents' findings.

Table 7.12: Multivariate logistic regression of all variables by teachers' evaluations

Teachers' Evaluation				
Predictor	**Chi Square**	**P-value**	**Odds ratio**	**95% Conf. Int.**
Pupil has friends at school	14.847	0.000	3.312	(2.43 – 4.52)
Teacher reported self-esteem	14.980	0.001	3.119	(2.36 – 4.13)
Pupil's academic progress	12.133	0.002	3.014	(2.32 – 3.91)
Teacher reported self-efficacy	9.706	0.008	2.987	(2.47 – 3.61)
Parental supervision	7.112	0.008	2.681	(1.93 – 3.73)
Parenting stress	8.740	0.013	2.552	(2.07 – 3.15)
Family income	8.256	0.016	2.469	(1.88 – 3.23)
Relationship with peers	7.931	0.019	2.297	(1.62 – 3.26)
Teacher-parent communication	7.363	0.025	1.958	(1.42 – 2.70)
Communication skills	7.316	0.026	1.865	(1.53 – 2.28)
Pupils' behaviour at school	4.565	0.033	1.730	(1.44 – 2.11)
Bullying	6.540	0.038	1.526	(1.18 – 1.80)
Sense of classroom community	6.340	0.042	1.422	(1.02 – 1.99)
Family structure	3.982	0.046	1.301	(1.01 – 1.67)

The multivariate logistic regression model using teachers' evaluations identifies fourteen dominant predictors. This fourteen-predictor parsimonious model explains 59.4% of the total variations in the responses. Table 7.12 shows that seven of these predictors are individual variables mostly related to behaviour, relationships and learning; four are home variables, two are whole school variables and the last one a whole classroom variable. According to teachers' evaluations, the best discriminant predictor is whether a pupil has

friends at school, followed by self-esteem, self-efficacy and academic progress. The pupils most likely to be in the promotive group are those who have friends at school and have good relationships with peers, have good self -esteem, self-efficacy, and communication skills, and are making good academic progress. They come from two-parent families which provide adequate supervision, have adequate income, low levels of parenting stress and good parents-teachers communication. The pupils also attend classrooms where pupils have a strong sense of classroom community and schools with low levels of misbehaviour and bullying.

Table 7.13: Multivariate logistic regression of all variables by parents' evaluations

Parents' Evaluation				
Predictor	**Chi Square**	**P-value**	**Odds ratio**	**95% Conf. Int.**
Gender	13.531	0.000	3.562	(2.77 – 4.57)
Teacher-pupil relationship	12.195	0.000	3.338	(2.45 – 4.55)
Family time	12.704	0.002	3.216	(2.48 – 4.17)
Bullying	11.578	0.003	3.163	(2.64 – 3.79)
Parental academic expectations	8.669	0.013	3.004	(2.46 – 3.67)
Engagement in school activities	5.379	0.020	2.619	(1.90 – 3.61)
Family income	7.545	0.023	2.543	(1.88 – 3.43)
Learning difficulties	6.948	0.031	2.112	(1.61 – 2.77)
Family structure	4.546	0.033	1.984	(1.59 – 2.47)
Parenting stress	6.488	0.039	1.843	(1.38 – 2.46)
Parental supervision	4.095	0.043	1.751	(1.45 – 2.12)
Behaviour at home	6.247	0.044	1.436	(1.11 – 1.86)
Communication skills	6.073	0.048	1.432	(1.08 – 1.89)
Family cohesion	3.875	0.049	1.289	(1.00 – 1.66)

The multivariate logistic regression model using parents' evaluations also identifies fourteen dominant predictors. Table 7.13 shows that this fourteen-predictor parsimonious model explains 67.8% of the total variations in the responses. Six of the predictors are individual variables mostly related to behaviour, relationships and learning; six are home variables and two are whole school

variables. None of the classroom related variables were found to contribute significantly in explaining variation in the responses. According to parents, the best discriminant predictor is gender, followed by the teacher-pupil relationship, family time, bullying at school, parental academic expectations, and pupils' engagement in school activities. Most of the remaining predictors are related to school factors. The pupils most likely to be in the promotive group are thus girls who have good relationships with their teachers, do not have learning difficulties, attend schools with low levels of bullying and a high level of pupil participation in school activities, and have parents who hold high academic expectations for them. They come from two-parent, cohesive families with good income, low levels of parenting stress, and good supervision. They have good communication skills and are well behaved at home.

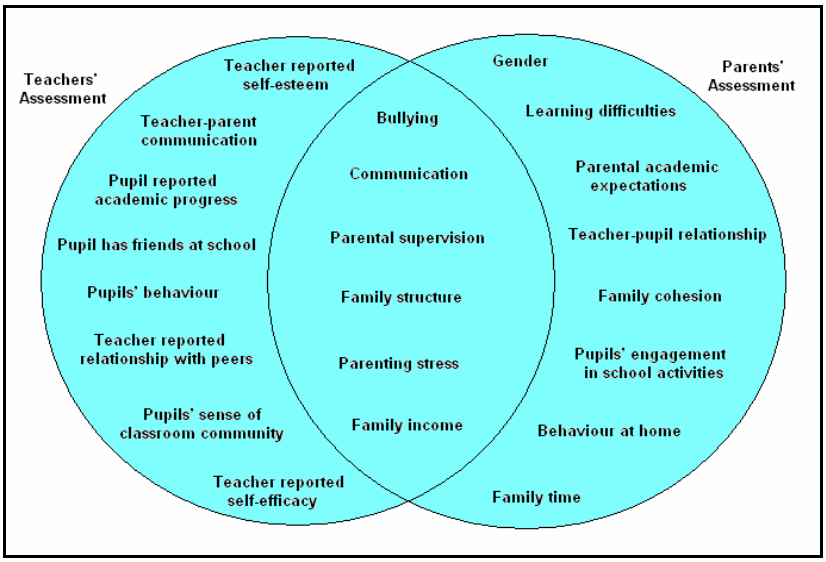

Figure 7.1: Best risk and promotive predictors by teachers' and parents' evaluations

Figure 7.1 shows that family structure, bullying at school, pupil's communication skills, parental supervision, parenting stress

and family income are significant predictors in both teachers' and parents' evaluations. Teachers' top evaluations underline factors such as friends at school, self-esteem, self-efficacy, and academic progress. On the other hand, the top parents' predictors are a combination of individual (gender), school (teacher-parent relationship, academic expectations), family (family time) and whole school (bullying, pupils' participation in school activities) factors. Considering the ranking, odds ratio, and teachers' and parents' evaluations, it would seem that the strongest predictors which discriminate the promotive from the risk groups over the years in the primary school are relationships with teacher and friends, bullying, family income, structure and time, self-esteem, self-efficacy and communication skills, and academic progress.

Pupils are less likely to exhibit SEBD and more likely to engage in prosocial behaviour if they have good self-esteem, self-efficacy and communication skills; good relationships with the teacher and classroom peers, have friends at school and are supported by them. They are engaged in classroom activities, make good academic progress, with parents who hold high expectations for them and who communicate well with their teacher. They have a good relationship with their parents, siblings and relatives and are well behaved at home. They come from two-parent, cohesive families with good income, low conflict, good quality family time and supervision, low parental stress and good parenting strategies. They attend classrooms where pupils are actively engaged and collaborate together in their learning and have a strong sense of classroom community, and schools where pupils are well behaved, participate in school activities, collaborate and support each other, and where bullying is low.

Figures 7.2-6.23 exhibit the associations between the likelihood of falling in the risk/promotive groups and the significant individual, classroom, school, home, community variables that were identified by the Logistic regression models.

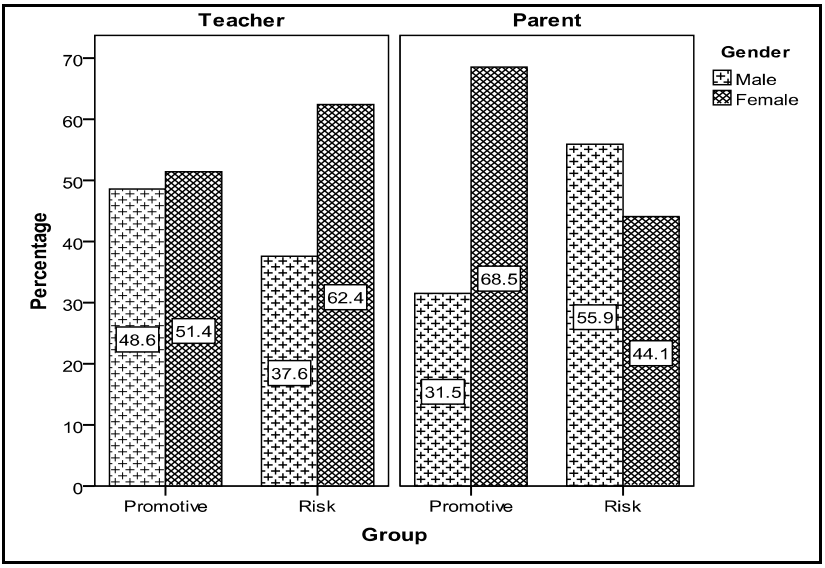

Figure 7.2: Risk and promotive groups by gender

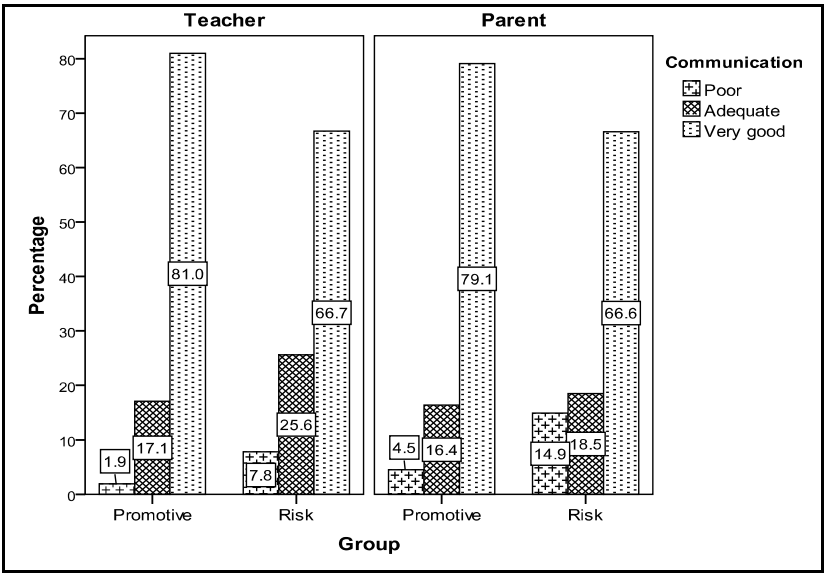

Figure 7.3: Risk and promotive groups by pupil communication

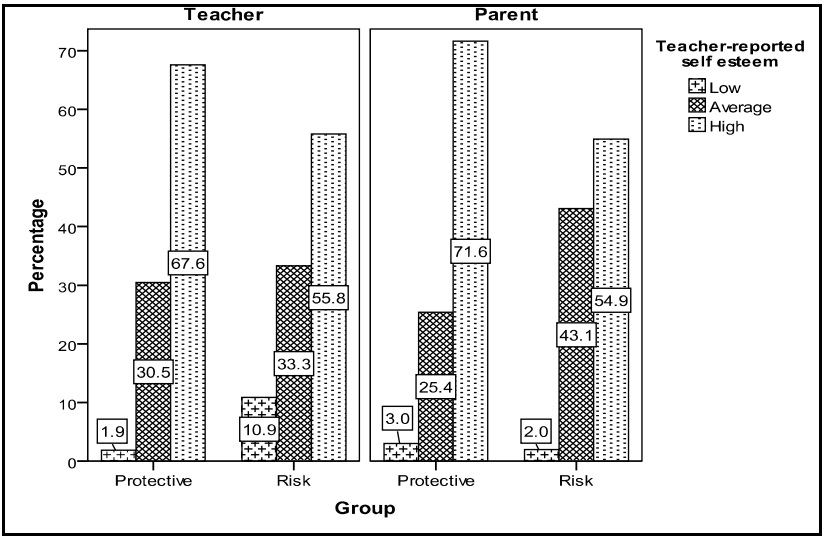

Figure 7.4: Risk and promotive groups by teacher-reported pupil self-esteem

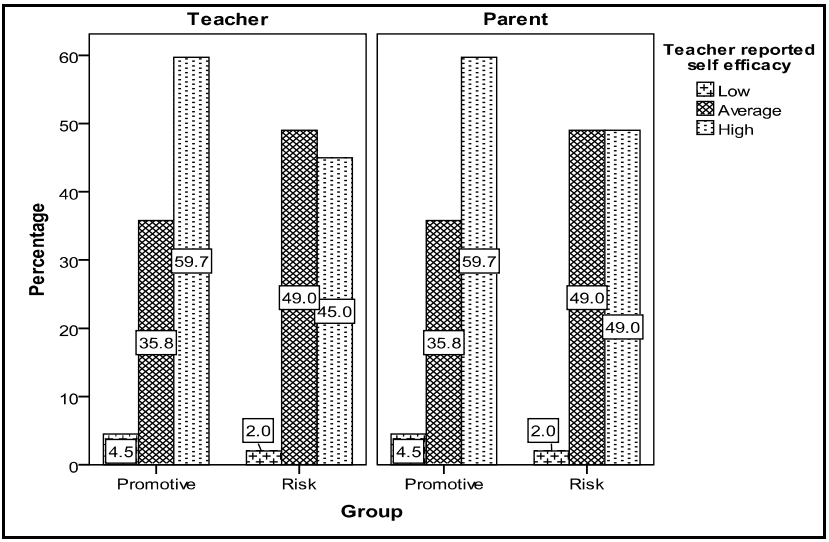

Figure 7.5: Risk and promotive groups by teacher-reported pupil self-efficacy

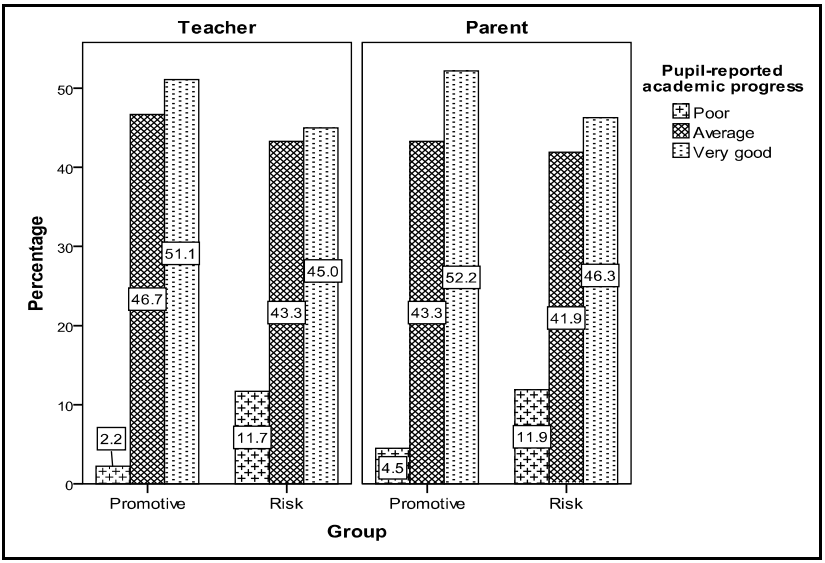

Figure 7.6: Risk and promotive groups by pupil-reported pupil academic progress

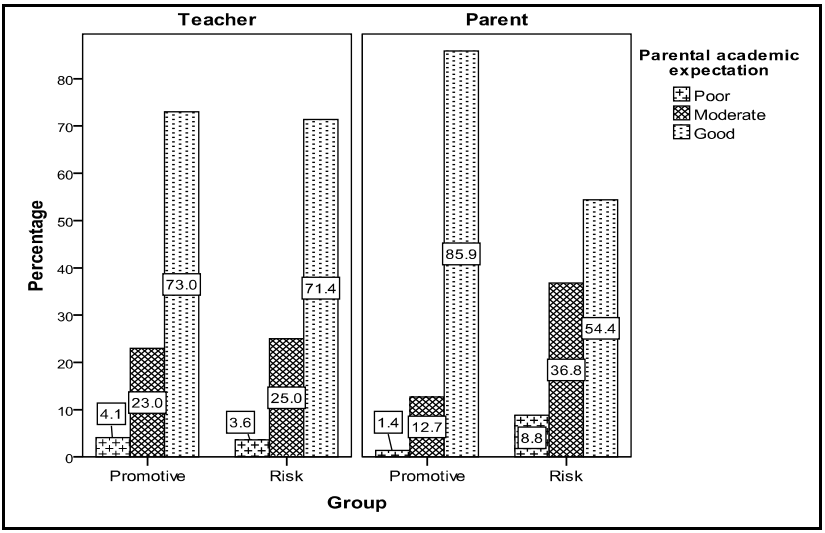

Figure 7.7: Risk and promotive groups by parental academic expectations

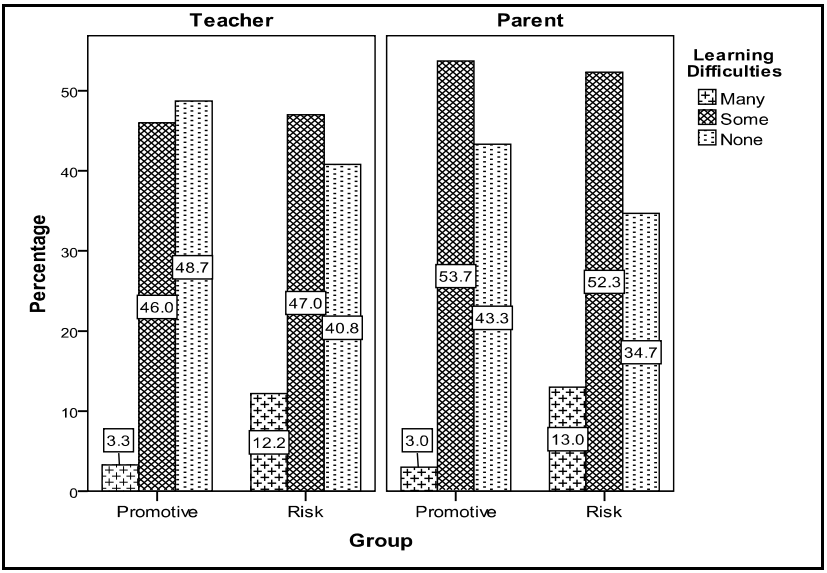

Figure 7.8: Risk and promotive groups by pupil learning difficulties

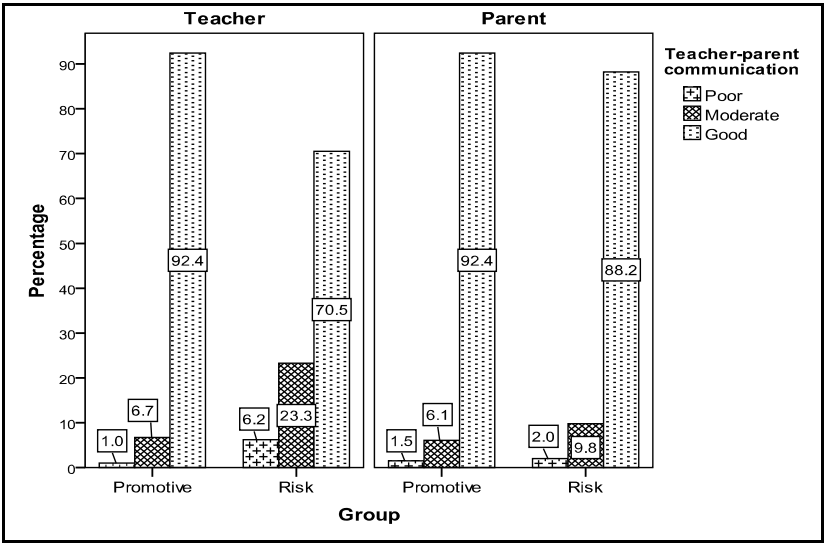

Figure 7.9: Risk and promotive groups by teacher-parent communication

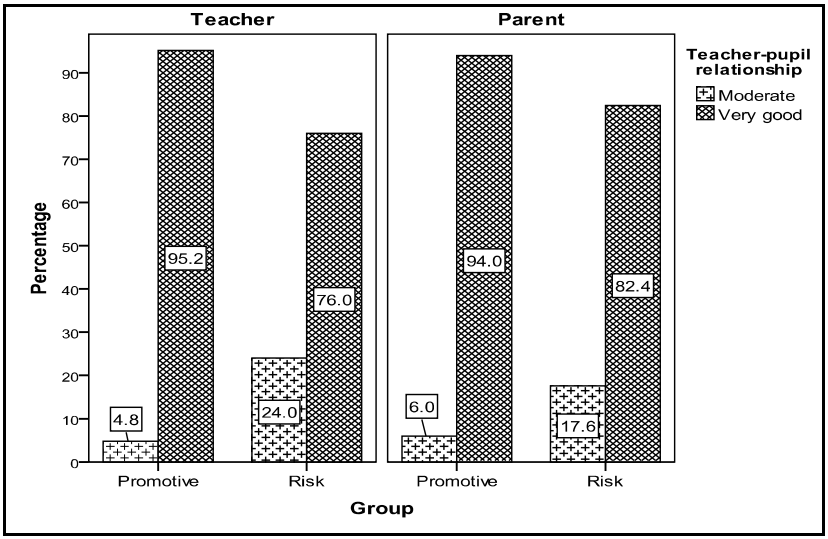

Figure 7.10: Risk and promotive groups by teacher-pupil relationship

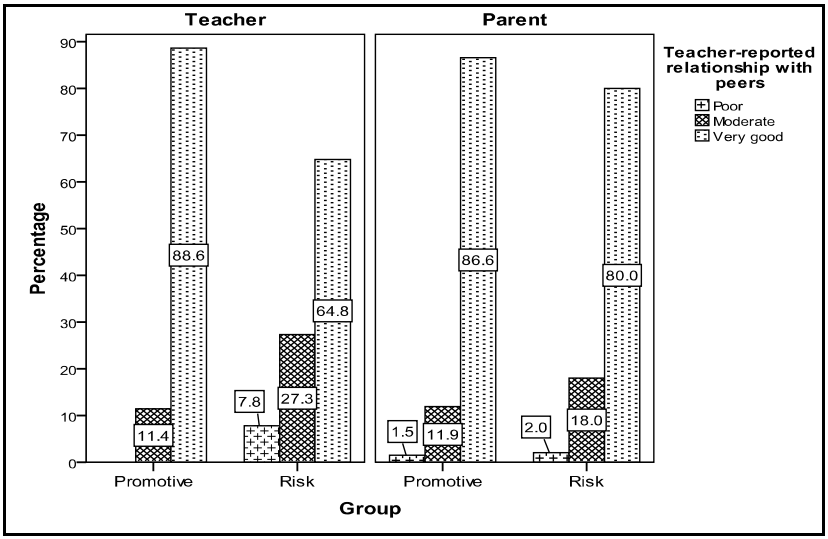

Figure 7.11: Risk and promotive groups by teacher-reported pupil relationship with peers

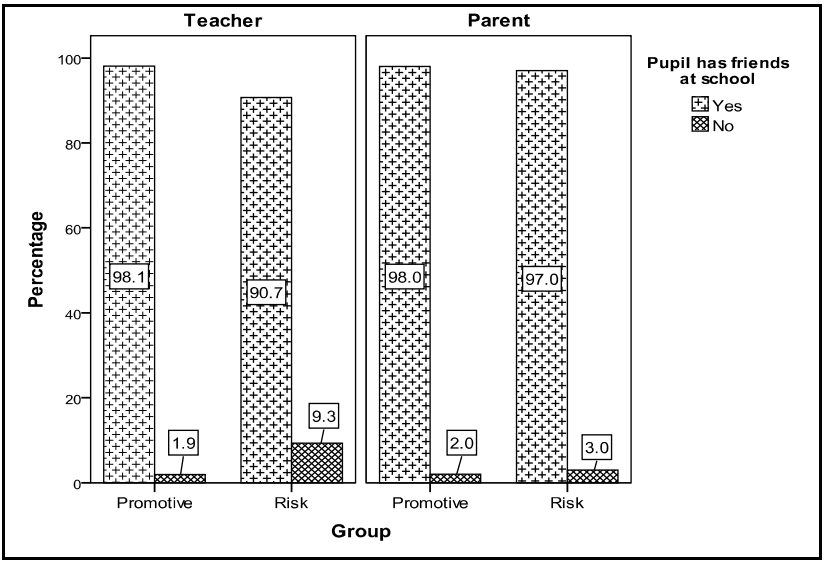

Figure 7.12: Risk and promotive groups by pupil friends at school

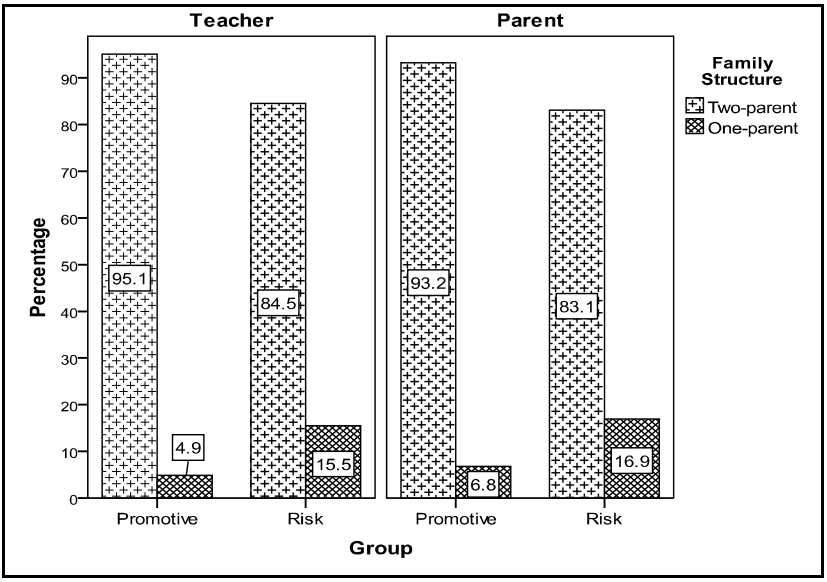

Figure 7.13: Risk and promotive groups by family structure

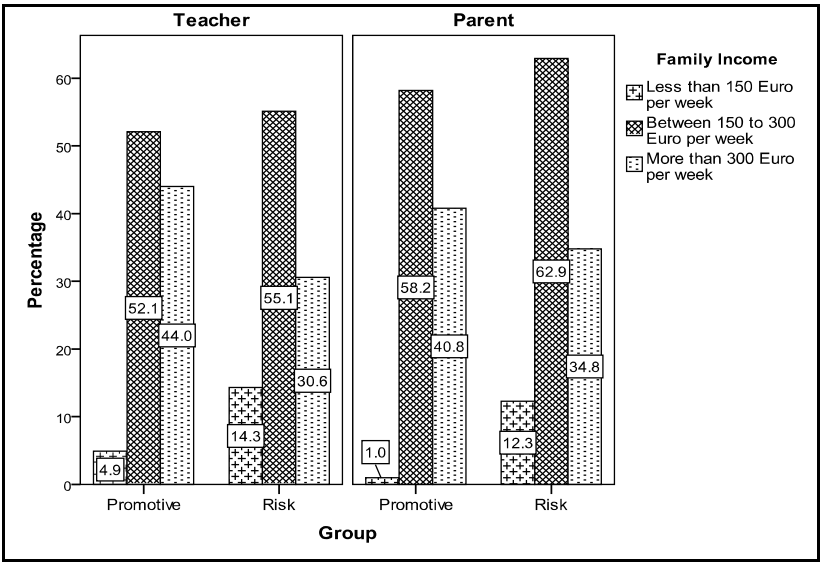

Figure 7.14: Risk and promotive groups by family income

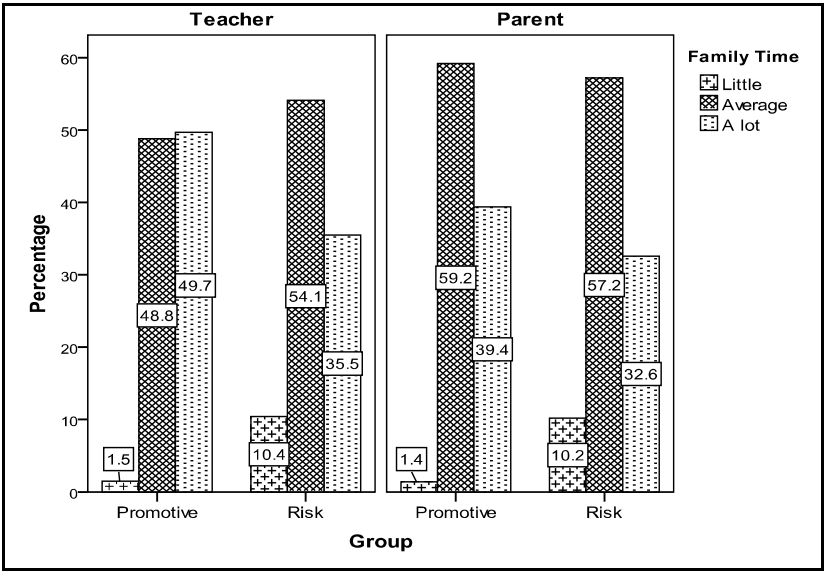

Figure 7.15: Risk and promotive groups by family time

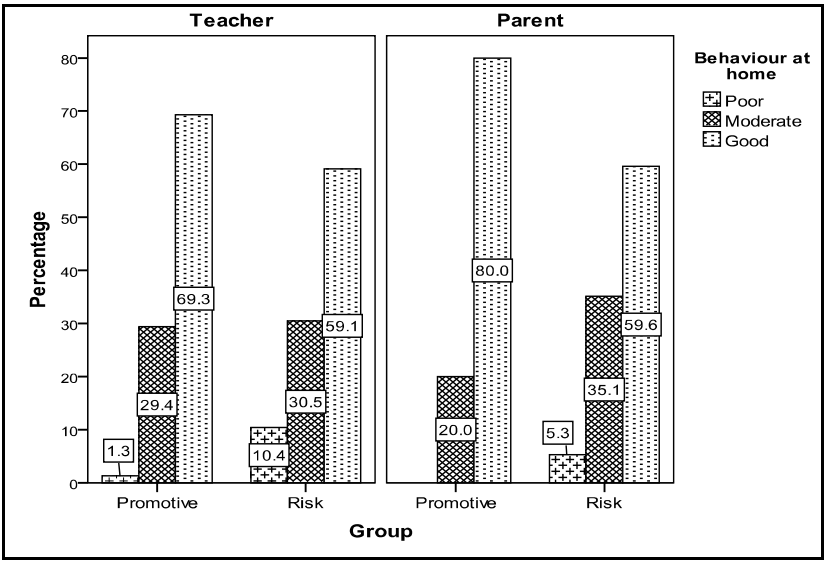

Figure 7.16: Risk and promotive groups by pupil's home behaviour

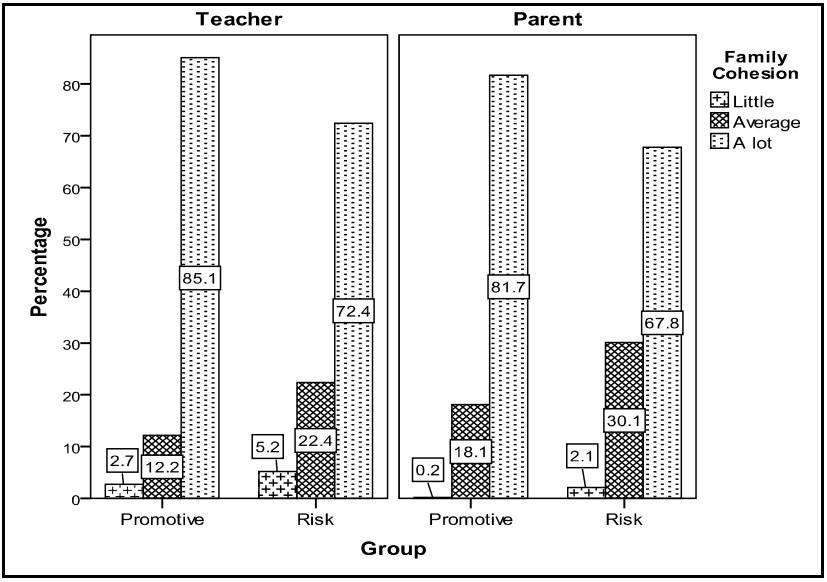

Figure 7.17: Risk and promotive groups by family cohesion

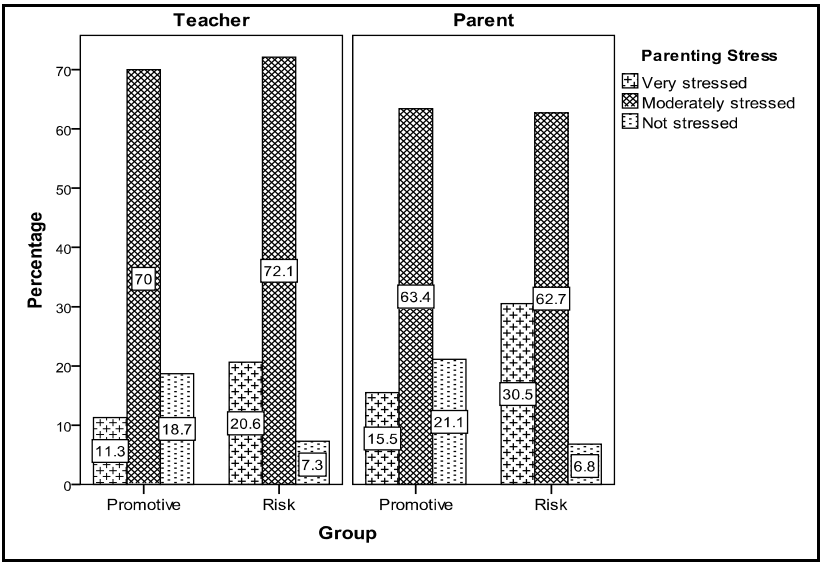

Figure 7.18: Risk and promotive groups by parenting stress

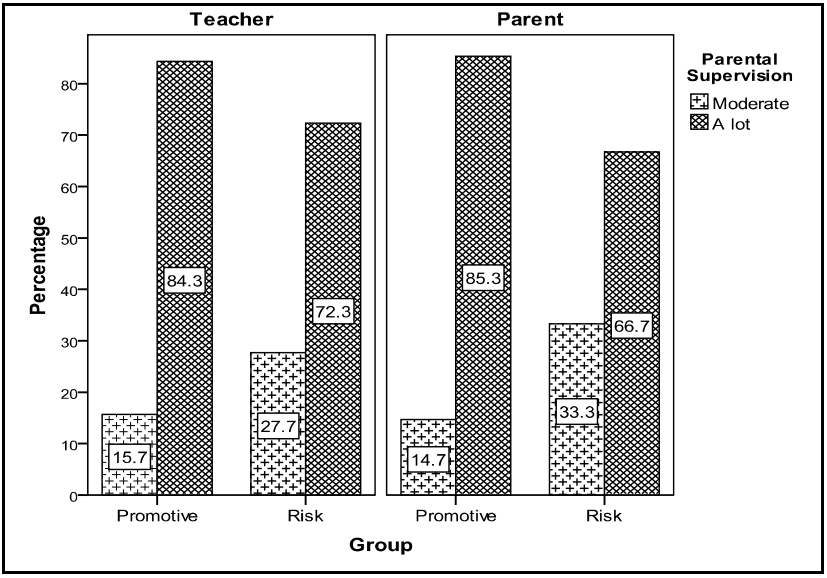

Figure 7.19: Risk and promotive groups by parental supervision

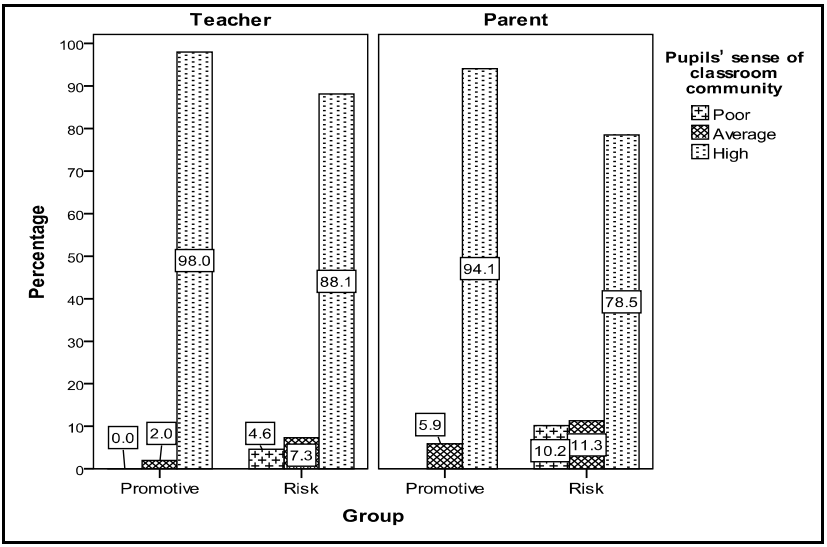

Figure 7.20: Risk and promotive groups by pupils' sense of classroom community

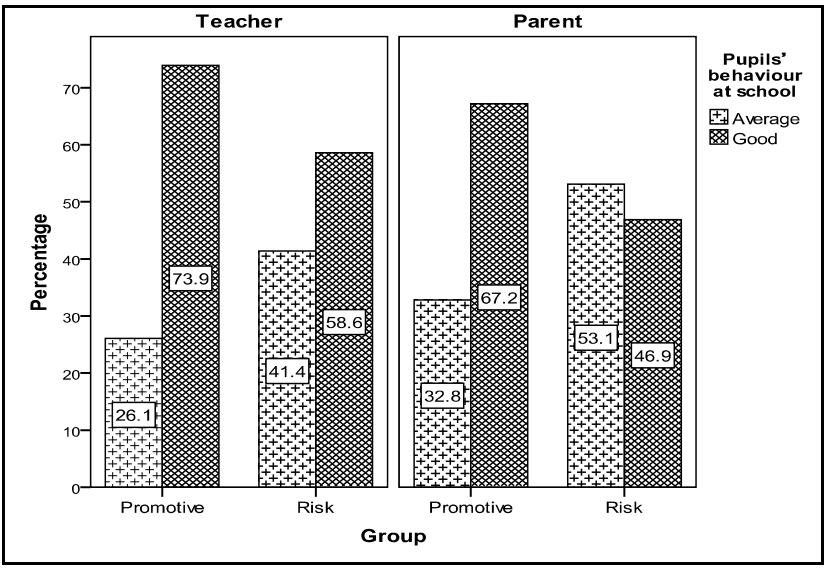

Figure 7.21: Risk and promotive groups by pupils' school behaviour

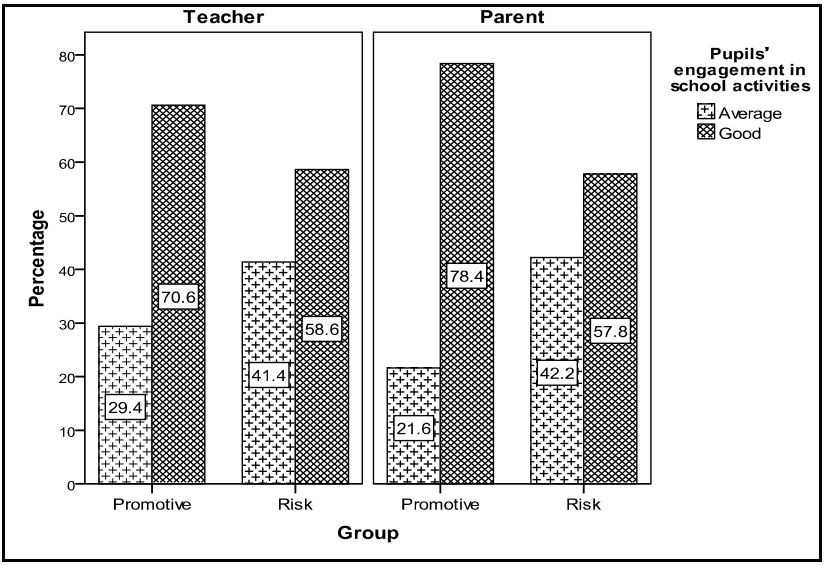

Figure 7.22: Risk and promotive groups by pupils' engagement in school activities

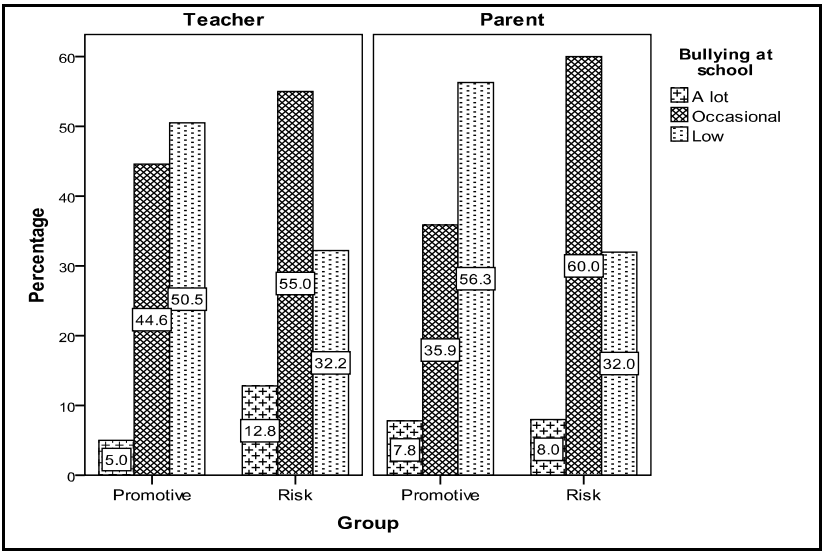

Figure 7.23: Risk and promotive groups by school bullying

Conclusion

8 Conclusions and Recommendations

This chapter brings together all the results which emerged from the various analysis of the study, summarising the key findings and discussing their implications for practice and further research. The first section describes the major findings, identifying the strongest predictors which emerged from the study and the relationship between the risk and promotive factors. The following section then discusses the key predictors in more detail, with recommendations for practice in each section.

8.1 Overall findings and conclusions

8.1.1 Year 4 pupils

9.4% of Year 4 pupils have SEBD according to teachers, a rate similar to the 9.05 rate for primary school pupils established in the previous study and in the international literature (Meltzer et al., 2000; Cefai, Cooper and Camilleri, 2008). The prevalence rate according to parents is 7.8%, but although lower, the difference is not significant. Boys are more likely than girls to have SEBD, but again the difference is not significant. The most common difficulties in Year 4 are those related to restlessness, hyperactivity and lack of attention, followed by conduct (teachers) and emotional (parents)

problems respectively. Both teachers' and parents' evaluations suggest that Year 4 boys may be more vulnerable than girls, having more difficulties and exhibiting lower prosocial behaviour. The data also suggests that both pupils' difficulties (particularly conduct and peer problems) and prosocial behaviour increased from Year 1 to Year 4. The increase in difficulties appear to be more marked for boys in contrast to girls, but teachers' and parents' findings tend to diverge regarding gender differences.

The best overall predictors of SEBD in Year 4 are related to pupils' relationships with significant adults and peers, engagement in the learning process, and family dynamics. Pupils' relationships with peers, engagement in learning, support from close friends, parental expectations, family time, father occupation, pupils' sense of classroom community, and behaviour at home are some of the strongest predictors on the basis of teachers' and parents' evaluations. None of the whole school variables emerged as significant variables when analyzed collectively with the other variables using regression models. The overall picture suggests that Year 4 pupils most likely to have SEBD

- are poorly engaged in classroom activities, are repeating a year, have poor relationships with peers, and lack support from close friends;
- attend classrooms where pupils exhibit poor play behaviour and low sense of community;
- show behaviour difficulties at home, including problematic relationships with siblings, and come from families with low parental academic expectations, little family time, and where the father is either poorly skilled or unemployed.

Positive peer relationships and gender emerged as the dominant predictors of prosocial behaviour in Year 4, but family and parent characteristics also appear to be somewhat related to prosocial behaviour, particularly good teacher-parent communication, two-parent families, good behaviour at home, family time and family conflict. Year 4 pupils most likely to exhibit prosocial behaviour are:

- female pupils who have good relationships with peers, high self-efficacy, and whose parents and teacher communicate well together;
- attend classrooms with high levels of pupils' engagement;
- are well behaved at home and come from two-parent families which provide quality time and have low levels of conflict.

8.1.2 Strongest risk and promotive predictors

An examination of the study as a whole suggests that the pupils at high risk for developing SEBD are those who come from single parent families, attend schools with high levels of bullying, have poor communication skills, poor relationships with peers, teachers, friends and parents, and have parents who are stressed and have low academic expectations for their children (Box 8.1).

Box 8.1: Window of Vulnerability

A longitudinal increase in SEBD is more likely to occur if a pupil:

- Has poor communication, self-esteem and self-efficacy.
- Has poor relationships with teacher and peers, and has few friends.
- Makes poor academic progress and is not engaged in classroom activities, with poor home-school communication and low parental expectations.
- Comes from a single parent family, with high levels of parenting stress, lack of supervision and family time, and high level of conflict
- Exhibits poor behaviour at home and poor communication with parents and relatives, and does not participate in local organisations.
- Attends classrooms with lack of pupil participation, lack of resources and poor sense of classroom community.
- Attends schools where bullying is prevalent, pupils' behaviour is poor, and pupils' and staff's collaboration is low.

These are the pupils most at risk for developing SEBD if the situation at home and at school does not change as the pupils move from one year to the other in primary school. The more risk factors they have, the more likelihood of difficulties in their social and emotional development, psychological wellbeing and academic success. One of every eleven children is at high risk for developing mental health problems, while 3% are at very high risk. However, some risk factors may be more likely to lead to SEBD than others.

On the other hand, the pupils most likely to engage in prosocial behaviour are those who have good relationships with their peers and the class teacher, attend schools where bullying is low, have good self-efficacy and self-esteem, are actively engaged in the learning process, and come from two parent families with good income (see Box 8.2).

Box 8.2: Window of Opportunity

A longitudinal increase in prosocial behaviour is more likely to occur if pupil:

- Has good communication skills, high self-esteem and self-efficacy, is not on medication/therapy and is a female.
- Has good relationships with teacher and peers, plays with, and is supported by, peers, is academically engaged and making good progress, with good teacher-parent communication and high parental academic expectations.
- Comes from a two-parent, cohesive family with high quality time and low levels of conflict and parental stress.
- Has good relationship with parents and siblings, and is well behaved at home.
- Attends a classroom with adequate resources and well trained teachers, where pupils have a sense of community and participate actively in activities.
- Attends a school with a low level of bullying, good pupil behaviour, high pupil participation in school activities, and pupil support and collaboration.

The more such factors are present in pupils' lives, the more likely they are to enjoy psychological wellbeing and mental health as they move from one year to the other in primary school. For instance, the chance of having mental health problems when at least five promotive factors are present is 0%, compared to 60% when no promotive factors are present.

Box 8.3: Portrait of healthy students

Pupils are less likely to exhibit SEBD and more likely to engage in prosocial behaviour if they

- Have good self-esteem, self-efficacy and communication skills.
- Have good relationships with their teacher and classroom peers, have a number of friends at school who support them, are engaged in classroom activities and make good academic progress.
- Have parents who communicate well with their teacher and who hold high academic expectations for them.
- Have good communication with their parents, siblings and relatives, are well behaved at home, are members of two-parent, cohesive families with good income, low conflict, quality family time and supervision, low parental stress, and good parenting strategies.
- Attend classes where pupils collaborate together, are actively engaged in their learning, and have a strong sense of classroom community.
- Attend schools where pupils are well behaved, participate in school activities, collaborate and support each other, and where bullying is low.

When all the factors were examined to identify which of these discriminated the risk group (pupils who show an increase in SEBD and a decrease in prosocial behaviour) from the promotive group (pupils who manifest an increase in prosocial behaviour and a decrease in SEBD), a similar though not identical picture emerged. The factors most likely to lead to a healthy social-emotional trajectory in the early primary school years, are pupils' relationships

with friends, teacher and peers, low bullying in school, active engagement, good academic progress, high self-esteem and self-efficacy, two-parent families with good income, adequate supervision and quality family time, low parenting stress and high parental expectations. The more pupils have of these positive factors, the more likely their social and emotional development, mental health and school success will improve (Box 8.3).

Some predictors feature as both risk and promotive factors. Bullying, family structure, communication skills, close friends, and peer and teacher-pupils relationships, are some of the strongest predictors overall, emerging not only as top predictors, but also as common risk and promotive factors. Self-esteem, teacher-parent communication, parental academic expectations also emerge as other common predictors from teachers' and parents' evaluations. The more the pupils are exposed to these factors at the negative end of the dimension (e.g. high level of bullying), the more at risk they are for developing SEBD and mental health problems. The more they have of these factors at the positive end of the dimension (e.g. close positive relationship with peers), the more likely pupils will steer away from SEBD and engage in prosocial behaviour.

Risk factors also tend to be cumulative, with one risk leading to other risks (Newman, 2004). Single parent families for instance, are at risk of poverty, which is also linked to parental stress, less family time, lower parental academic expectations, and inadequate supervision amongst others. Pupils with five or more of these negative factors have 75% chance or more of developing SEBD in the early primary years. The poor are at risk of becoming poorer unless the poverty chain is broken. Research seems to suggest, however, that besides the number of risk factors, we need also to take into account the type or context of the risk/s present (Appleyard et al., 2005). The number of risks becomes more meaningful if we examine the nature or context of these factors and how they interact and 'add' together in impacting psychological wellbeing.

We can protect the young child from SEBD, mental health problems and school failure, if we reduce the significant risk factors and increase the promotive ones in his or her life. Our efforts thus need to be directed towards preventing bullying at school, providing multi-faceted support to single parents, developing children's communication and friendship skills, self-esteem and self-efficacy, building closer relationships between the child and his/her teacher and peers, strengthening the school-family collaboration, raising parental and teacher academic expectations, reducing family poverty, and providing educational, psychological and economic support to parents and families. The more we reduce the risk factors and increase the promotive factors, the more chance vulnerable children have of taking a resilient pathway, maximizing their learning potential and enjoying healthy relationships with those around them. These positives thus become the building blocks of resilience in childhood.

8.1.3 Key role of proximal processes in classrooms and families

One of the evident issues emerging from the analysis of the data is that the strongest risk and promotive factors are related to the proximal classroom and home contexts in contrast to the more distal school and community contexts respectively. The literature has long drawn our attention that the strongest influences on children's learning, behaviour and development are the home and the classroom where children develop their closest relationships and attachments and spend most of their time (Benard, 2004; Muis and Reynolds, 2005; Watkins, 2005; Cefai, 2008). Micro processes such as relationships with teachers, peers, parents and friends, academic engagement, positive beliefs and expectations, healthy family dynamics and effective parenting, have been shown to be significantly more influential in the development of SEBD and prosocial behaviour than whole school, neighbourhood and community factors, particularly the more structural variables. For instance, good parenting at home may counteract the negative impact of poverty, while supportive relationships and absence of

parental discord with adults, may help the child to cope with the impact of parental separation (Agaibi and Wilson, 2005; Morrison Gutman, et al., 2010). This finding underlines the need for interventions which support the building of healthy, supportive and responsive classrooms and families, with attention to the key processes operating in these two systems, particularly relational ones. On the other hand, the more distal risk and promotive factors may help to strengthen and complement the healthy processes occurring in the classrooms and families. For instance, lack of bullying and good pupil behaviour at school, as well as staff teamwork and collaboration, also impact pupils' behaviour in the classroom (McLaughlin and Talbert, 2006; Cefai, 2008). Healthy micro processes complemented and reinforced by positive macro processes, thus have a synergetic, value-added effect on pupils' development and behaviour.

8.1.4 The relationship between risk and protective factors

The literature suggests that our efforts to build resilience in children need to be directed simultaneously at both risk reduction and the enhancement of protective factors (Pollard, Hawkins and Arthur, 1999). We are also more likely to be effective in resilience building if risk factors are countered within the same context as much as possible, such as neutralizing school bullying by providing supervision and adult and peer support at school, or reducing the impact of marital discord by enhancing the child's relationships at home (Rutter, 1999). Our efforts need to be focused both on eliminating or reducing the risk factors children are exposed to, particularly chronic ones, while giving them adequate support and helping them to develop strengths and skills to offset the potential harm from the risk factors. Schools and families thus need to work hand in hand to support and reinforce each other's efforts and initiatives. Within such a perspective, schools are not merely the victims of social forces beyond their control. They may promote prosocial behaviour and psychological wellbeing one hand, or may lead to disaffection, school failure and anti-social behaviour on the

other. Even in the case of children facing multiple risk factors or very unstable situations at home, the support and respite provided by schools and teachers can help to create an oasis of safety and stability and a platform for growth and success (Luthar, Cicchetti and Becker, 2000; Benard, 2004). O'Dougherty Wright and Masten (2005) for instance, found that interventions which sought to build attachment and connectedness to school amongst vulnerable pupils, impacted various outcomes, including academic achievement, substance use, and antisocial behaviour.

8.1.5 Early intervention

Pupils' difficulties, particularly conduct and peer problems, tend to increase from Year 1 to Year 4, illustrating the need for timely and effective intervention as soon as children start attending school. The study has also identified the factors which are related to an increase in SEBD and in prosocial behaviour as pupils move from the early to the junior primary school years. The international literature has consistently shown that we are more likely to be effective in preventing SEBD and promoting psychological wellbeing and positive behaviour, if we start as early as possible when children are in preschool and the first years of primary school (Domitrovich, Cortes and Greenberg, 2007; National Institute for Health and Clinical Excellence, 2008; Farrell and Humphrey, 2009; Denham, Brown, and Domitrovich, 2010; DataPrev Project, 2011). Healthy social and emotional competence in the early years is linked to academic learning and emotional literacy, both in the short term and later on in the primary and secondary school years (Domitrovich, Cortes and Greenberg, 2007; Leerkes et al., 2008; Denham, Brown, and Domitrovich, 2010). The recently published National Curriculum Framework (MEYE 2011) underlines that it is in the early years that children build their wellbeing and self-esteem, recommending that they need to develop their social and emotional literacy skills during their first years at school. Maltese primary school teachers have also underlined the need for timely, adequate

and within-school early intervention services for pupils who need support in their behaviour (Ciantar, 2011).

A multi-faceted approach combining universal with selective and indicated interventions is the most effective approach to support the social and emotional development of young pupils (National Institute for Health and Clinical Excellence, 2008; Weare and Nind, 2011). It would also help to avoid inappropriate referrals to intervention and support services, while identifying the needs of pupils who may need within-school support as early as possible (National Institute for Health and Clinical Excellence, 2008). Universal interventions focus on creating supportive and responsive classroom and school contexts, while giving the opportunity to pupils to learn and practice important social and emotional skills. Pupils at risk may need support to remove those risks and provided with adequate support to offset the impact of the risk factors. Finally, pupils exhibiting SEBD at a young age would need to be provided with timely, adequate and continued support, making use of transdisciplinary, school-based interventions with the participation of parents and all the stakeholders involved. Nurture groups have been introduced recently in our schools and they promise to be an effective early intervention for young pupils at risk of, or with, SEBD. They also work closely with parents, thus helping to address some of the risk and promotive factors at home as well. Research shows that where they are well planned, implemented and evaluated, nurture groups can become an effective vehicle for resilience building amongst vulnerable children (Ofsted, 2011).

BOX 8.4: Moving beyond risk to resilience (CTARS 1991)

The Minneapolis public school system, building on work done over many years at University of Minnesota, has trained the majority of its teachers in resilience strategies using a training manual titled *'Moving beyond risk to resilience*'. Five specific resilience-enhancing strategies are promoted for children who need extra support:

Offering the opportunity to develop positive attachment relations, including:

- The opportunity to develop supportive relationships with a caring adult.
- Mentoring programmes in schools consisting of a one-to-one relationship with a school staff member.
- Building support systems for people on whom the children rely, particularly parents, which may involve parent education workshops, involving parents in school, positive feedback to parents on children's work, or simply additional supportive contact by letter, personal contact, or phone.
- The scheduling of extending teaching sessions to extend contact with one teacher rather than constantly changing classes.
- The use of peer helpers and cross age teaching to link young and vulnerable children with older and more resilient pupils.

The mobilisation of resources outside the community, including:

- Familiarising teachers with local resources and getting to know important and influential local people.
- Involving people from the wider community, including former pupils, in school based programmes.
- Locating supportive social welfare services within schools, both for all children and for specific cultural groups.

Increasing children's sense of mastery in their lives, including:

- Student recognition activities, certificates of achievement and the celebration of important developmental milestones.
- Teaching strategies that recognise different learning styles and alternative grading systems.

Building social competence as well as academic skills, including:

- Peer groups and social skills development programmes.
- Linking curricula with events and people in the community to illustrate the application of school-based learning to real life.

The reduction of unnecessary stressors, including:

- Pastoral support for children with emotional problems.
- Group rather than individual decision making for younger kids.

8.2 Risk and promotive factors and implications for practice

8.2.1 Self-efficacy, self-esteem, and communication skills

Pupils' self-esteem, self-efficacy and communication skills are three of the strongest predictors of SEBD and prosocial behaviour, not only amongst the individual characteristics variables, but in the overall analysis of the study. Young children with positive self-esteem, high self-efficacy and good communication skills are less likely to experience SEBD and more likely to engage in positive behaviour at school. Having optimistic views of oneself and confidence in one's ability and skills as a learner, have long been known to protect children from behaviour problems at school and to promote more positive behaviour in children. It enables young children to develop healthy relationships with peers, develop friendships, recruit support and avoid bullying, thus protecting them from other risk factors which might compromise their wellbeing and adaptive functioning (Linnenbrink and Pintrich 2003; Guttman and Brown, 2008; Morrison Gutman et al., 2010). It may also serve as a moderating factor for children at risk, such a protecting low income boys from potential SEBD, particularly peer problems (Guttman and Brown, 2008), young children from disadvantaged home backgrounds from school failure (OECD, 2011) and moderating the effects of traumatic experiences in childhood (Masten, Best and Garmezy, 1990). It also enables vulnerable young children to mobilize these resources in times of difficulty to exert control and overcome the challenges they may face at school or at home. Negative views of oneself and one's abilities and in the ability to bring about change in one's lives, are likely to persist throughout childhood if not nipped at the bud, with consequent negative effect on learning, behaviour and relationships (Seligman, 1998).

Parents, teachers and significant others in children's lives can promote young children's self-esteem and self-efficacy by providing opportunities for success in valued tasks both at school and at home, promoting a sense of competence, expressing positive beliefs and optimism in children and in their abilities, providing

space for autonomy and self-directed activities, creating safe, caring and supportive contexts with secure and healthy attachments where children can grow, thrive and maximise their potential, and by teaching social and emotional skills from the early years. Resilience building where children learn to exert more control over their lives, believe in their ability to bring about change in their own lives, learn to solve problems effectively, and have an optimistic outlook on life, could be an essential part of the curriculum from a young age (ibid.)

One of the implications of this finding is that emotionally literate children will be able to have more successful learning and social experiences at school (cf. MEEF, 2011). Consistent research evidence suggests, however, that one-off, bolt-on programmes in emotional literacy such as self-esteem, self-efficacy and communication skills, are not likely to work in the long term (Ofsted, 2007; Greenberg, 2010; Durlack et al., 2011; Weare and Nind, 2011). Such skills need also to be taught explicitly rather than simply captured from the context (Greenberg, 2010; Weare and Nind, 2011). Social and emotional education needs to be a core competence in primary education, facilitating not only children's emotional literacy skills, but enhancing academic learning as well (National Institute for Health and Clinical Excellence, 2008; Greenberg, 2011; Weare, 2010; Cefai et al., in press). A dual focus on academic and social-emotional learning promotes academic achievement, engagement, positive behaviour and healthy relationships (Payton et al., 2008; Dix et al., 2011; Durlak et al., 2011). It also acts as an antidote against both internalised and externalised problems in children such as anxiety, depression, conduct problems, and violence (Waddell et al., 2007; Blank et al., 2009). It enables students to regulate their emotions, cope better with classroom demands and frustrations, and solve problems more effectively. Pupils will be able to relate better and work more collaboratively with others, avoid entering into unnecessary conflicting situations, and synergise their learning potential through collaborative learning. They would also enjoy better relationships with the classroom teacher, which widens their opportunities for learning. These are competencies which children can learn and use

effectively given the right context and tools, particularly as they are still at a young age when their personality is still developing.

There is a need for a new structure in public school systems – An "Office of Social and Emotional Development". This office is focused on curriculum and policy and is NOT located with psychologists, counselors, social workers, and special educators, but in the central mission of schools – Curriculum. It involves both teacher training in quality teaching processes as well as specific curriculum. (Greenberg, 2011)

8.2.2 Gender

The evidence on gender differences in the study is not always consistent, particularly when comparing the findings from parents' and teachers' evaluations. The general picture, however, seems to suggest that while girls are more likely to engage in prosocial behaviour than boys, boys are more likely to manifest SEBD than girls, particularly in conduct and hyperactivity problems. It is indicative that young boys are particularly prone to develop SEBD, with clear targets for early intervention. It must be borne in mind, however, that the gender difference observed in SEBD is not as wide as that usually portrayed in international research (see Cefai, Cooper and Camilleri, 2008). Moreover girls may be underrepresented because of their tendency to internalize rather than externalize difficulties (Cooper and Jacobs, 2011), while in the last half a century or so, the rise in externalizing difficulties has increased at a greater rate amongst girls than amongst boys (Rutter and Smith, 1995). Indeed there is a danger of construing SEBD as a male-dominated field, with girls receiving less attention and resources than boys (Osler and Vincent, 2003). Young girls need support not only with regards to emotional problems where they tend to experience more difficulties than boys, but with behaviour problems as well.

8.2.3 Disability, health and learning problems

Another group of pupils at risk for SEBD are those having a disability, health problem or learning difficulty, and undergoing medication and/or treatment. International research has shown that pupils with disability/learning difficulties face greater psychological difficulties and are at greater risk of bullying than their peers, with up to 80% of such pupils being liable to bullying at school (Mencap, 2007; Morrison Gutman et al., 2010). This is a particularly salient point in view of the study's finding that school bullying is one of the major risk factors for SEBD in primary school. This group of pupils is also particularly vulnerable during developmental transitions, such as the transition from one school to another (McGee et al., 2004). More work thus needs to be done to ensure the effective inclusion of pupils with disability and other difficulties in the learning and social processes taking place in the classrooms and outside such as integrating the support such pupils receive within the mainstream school services to avoid stigmatization and labeling, providing adequate and effective support during developmental transitions, and promoting values such as diversity, solidarity and collaboration (Bartolo et al., 2007, Cefai, 2008; Morrison Gutman et al., 2010).

Mainstream staff collaboration, accessible and high quality within-school professional and educational support and provisions starting as early as possible in the pupils' life, peer preparation programmes, collaborative learning, buddy systems, differentiated teaching, bullying prevention and home-school collaboration, are some of the tools which can be used to ensure that pupils with disability/learning difficulty do not develop SEBD as well. A balance between universal interventions in learning, behaviour and emotional literacy and targeted interventions for pupils experiencing risk or difficulty in any area of their development, is crucial for healthy cognitive, social and emotional development. Research shows that both universal and targeted approaches have their place in school, and that a dual focus is more effective than one focusing only on either universal or targeted interventions (Adi et al., 2007; Greenberg, 2010).

Box 8.5: Emotional Literacy through Circle Time

Quality circle time (Mosley, 1993) is a child-friendly approach that facilitates the practice of socio-emotional literacy skills in an inclusive, caring and democratic climate. It lends itself effectively to practising skills such as speaking, listening, turn-taking, problem-solving and appreciating each other's company. Through structured sessions within a safe and supportive setting, pupils can participate in developmentally-appropriate tasks, games and discussions to help develop their self-esteem, self-confidence, and other emotional and social literacy. Circle time sessions follow a carefully structured five-step model, built around the skills of listening, speaking, looking, thinking and concentrating. Pupils take a more active role during these sessions than they usually do in more traditional lessons, and the teacher provides space, opportunity and encouragement for the group to discuss personal and social issues in a safe and supportive environment. Circle time operates according to a number of rules which ensure that a supportive atmosphere is maintained, including, that only positive comments are made during the session; listening when somebody is speaking; keeping hands and legs to oneself; having a right to pass (not speak) if one wishes to; and respecting confidentiality. Pupils are encouraged to come up with suggestions and solutions to the issues being discussed. Circle Time sessions are structured (part of the regular classroom timetable), solution focused and make us of a variety of teaching and learning strategies. The sessions consist of five sequential stages, namely meeting up – playing a game; warming up – breaking the silence; opening up – exploring issues; cheering up – celebrating the positive; and calming down – bridging to the next lesson.

8.2.4 Teacher-pupils relationship

Classroom relationships and pupils' engagement in the learning process are the two major set of significant individual school-related variables. The teacher-pupils relationship is one of the strongest predictors in the prevention of SEBD and promotion of

prosocial behaviour, particularly on the basis of teachers' evaluations**.** Research has long established this relationship as the platform on which learning and positive behaviour in the classroom are built (Hamre and Pianta, 2001; Battistisch, Schaps and Wilson, 2004; Cefai, 2008). It is particularly meaningful and protective for vulnerable pupils who lack such relationships in their homes (Hamre and Pianta, 2001, 2005). Secure and healthy relationships have also been found to increase pupils' ability to cope with stressful experiences and develop self-reliance and autonomy (Masten et al., 1990; Bernard, 2004). Unhealthy relationships, on the other hand, are related to both academic and behaviour difficulties in young pupils, particularly boys (Hamre and Pianta, 2001, Hughes and Kwok, 2007).

A healthy and supportive teacher-pupil relationship in primary school is associated with positive interactions with peers, emotional regulation, academic achievement and fewer behaviour problems (Battistisch, Schaps and Wilson, 2004; Klem and Connell, 2004; Cefai, 2008; Wu, Hughes and Kwok, 2010). Kindergarten pupils who enjoyed a non-conflictual relationship with their teacher were more likely to develop healthy relationships with their teachers as they moved on in their primary school years. (Pianta and Stuhlman, 2004; Berry and O'Connor, 2009).

Teachers who develop emotional connectedness with their pupils from the very first year in the primary school thus help young children to embark on a positive developmental trajectory. This protective effect operates for all pupils in the classroom, but appears to be particularly significant for vulnerable children in both their academic and social growth (Benard, 2004; Hamre and Pianta 2005; Baker, 2006; Hughes and Kwok, 2007). It provides a scaffold of support and stability which encourages pupils to engage in positive social interactions with each other and with other adults without any undue stress, thus helping them to develop healthier relationships in their lives.

8.2.5 Peer relationships

Positive peer relationships in the classroom are the top overall predictor of positive behaviour in primary schools according to teachers' evaluations. They provide an important social context for children's positive development and behaviour, particularly as children start to grow older (Wentzell, 1998; Blank et al., 2009). Pupils who feel accepted and respected by their classroom peers, feel valued members of their group; the consequent sense of classroom belonging is related to positive classroom behaviours like motivation, engagement and positive interactions with peers (Wentzell, 1998; Battistisch, Schaps and Wilson, 2004; Blank et al., 2009). A related strong predictor is having close friends with whom to work, share and play. In an interesting study, Bolger and Patterson (2003) found that having a supportive relationship with one or more close friends is a protective factor against peer rejection itself. It will also be difficult for bullying, one of the key risk factors for SEBD identified in this study, to thrive in contexts marked by close friendships and supportive peer interactions.

The classroom teacher may employ various strategies to create a supportive and collaborative climate in the classroom with pupils sharing and helping each other in both academic and social goals. Social and emotional education through Circle Time will enable pupils to develop more the skills of effective communication, building and maintaining relationships, constructive conflict management, and collaborative working. Collaborative learning experiences makes it more possible for pupils to relate well with each other, become more interconnected and develop a sense of belonging and community (Johnson and Johnson, 2008; Friend and Cook, 2009). Peer mentoring, peer tutoring and buddy systems, as well as cross age tutoring connecting young vulnerable children with older more resilient pupils, are other mediums through which educators may promote positive and collaborative pupil interactions in the classroom (Browne et al., 2004; Adi et al., 2007, Garrard and Lipsey, 2007). Winfield (2001) reported that peer learning groups have been found to operate as protective factors for pupils at risk, as

they facilitate improved skills in relationships with both peers and adults.

The teamwork between the class teacher and other adults in the classroom, such as Learning Support Assistants, the staff's own collegiality and collaboration, and the teacher-parents collaboration are other sources that sustain a collaborative classroom community. Finally, the teacher's own relationship with the pupils may serve as a model and incentive for more prosocial relationships amongst the pupils themselves, not only setting standards of social interactions in the group, but also facilitating the acceptance of rejected or difficult pupils (Hughes, Cavell and Wilson, 2001; Donahue et al., 2003; Lane, Little, et al., 2010).

8.2.6 Teacher-parent relationship

The teacher-parent communication featured as another significant predictor of pupils' prosocial behaviour. Good communication between teachers and parents is related to both pupils' academic achievement and social behaviour, and appears to be particularly significant for pupils at risk (Battistisch, Schaps and Wilson, 2004; Hughes and Kwok, 2007; Farrell and Humphrey, 2009). This is mainly true of the early primary school years when parents' involvement in children education is usually at its highest (Green et al., 2007; Kikas, Peets, and Niilo, 2011). When schools seek to build effective partnerships with parents and the community by involving them in their academic and social activities, pupils show increases in attendance rates and positive attitudes towards learning, good behaviour, and emotional literacy (Ade et al., 2007; Slee et al., 2009; Weare and Nind, 2011). Schools may seek to provide more accessible and welcoming classrooms and schools for parents, with opportunities for meaningful and influential contributions to the academic and social life of the school. What happens at school has a positive impact on familes and communities (Durlak and Weissberg, 2007). They may also seek to encourage parents to become more involved and participate in the education of

their children, to support their children in their learning, and instill in them high academic self efficacy. Parental education, especially for parents coming from impoverished environments, may also help to promote educational resilience amongst vulnerable children. For instance, nurture groups may operate as centres for parenting education, with parents supported to reinforce the cogntive, social and emotional skills pupils are learning at school (Cefai and Cooper, 2011).

8.2.7 Pupil engagement and achievement

Academic engagement and progress, learning difficulties and support with learning, and academic expectations emerged as some of the strongest predictors in the study. The findings underline the inextricable link between learning and behaviour and how learning difficulties may lead to social, emotional and behaviour difficulties over time (Lanrdrum, Tankersley and Kaufmann, 2003; Gresham et al., 2004; Ford et al., 2007; Cefai, Cooper and Camilleri, 2008). The study also highlights the value-added effect when teachers and parents work hand in hand to support children's education. Pupils who are actively engaged and supported in their learning by teacher, peers and parents, and have teachers and parents who expect them to do well and communicate well together, are more likely to steer away from SEBD and engage in prosocial behaviour (cf. Ford et al., 2007; Reschly and Christenson, 2009; Morrison Gutman et al., 2010).

Identifying pupils' needs and strengths and adapting learning activities accordingly, recruiting pupils' motivation and engagement, providing adequate, timely and tailored support, involving parents, and ensuring academic progress from the first year of the primary school, have high promotive value for primary school pupils (cf. Bartolo et al., 2007; Farrell and Humphrey, 2009; Ciantar, 2011). The new National Curriculum Framework (MEEF, 2011) underlines the need for meaningful, engaging and participative learning experiences and the use of connective pedagogy in the

classroom. The current exercise in developing benchmarks for attainment in core competencies, while ensuring that all pupils move towards the achievement of the set academic targets within a developmental, inclusive perspective, providing adequate support as necessary, would ensure that primary school pupils would be able to learn and achieve according to their potential and readiness level (MECYS, 2009). Further research needs also to be carried out on developing SEBD-friendly pedagogy in our schools. Most of the research in the area has focused on behaviour management and support, while particular pedagogies for pupils with SEBD are underdeveloped and under-researched (Lewis and Norwich, 2004).

8.2.8 Academic expectations

High parental and teacher academic expectations are highly predictive of both SEBD and prosocial behaviour in primary school, acting as both risk and promotive factors. Such expectations are particularly significant for pupils considered at risk or experiencing difficulties in their cognitive, social or emotional development (Benard, 2004; Lane, Pierson, et al., 2010). The significant adults in the young child's world thus need to focus more on his or her strengths and potential rather than weaknesses and deficits. They need to have high but reasonable expectations for the learning and achievement of the pupil, being 'optimistically tuned to their student's strengths and hidden possibilities' (Benard, 2004). The communication of these positive expectations do not only impact their own behaviour towards the pupils, but enhances the pupil's own belief and confidence in his or her own ability as a learner (Guttman and Brown, 2008; Morrison Gutman et al., 2010). Academic expectations may be relayed to pupils through the expression of positive beliefs and optimism, an accent on pupil's strengths and skills and provision of opportunities for success in valued tasks, adequate and timely support, space for autonomy, and caring and supportive contexts.

Box 8.6: Pupils' recommendations on learning and behaviour

What helps pupils to learn?
54% teacher support
53% meaningful lessons
50% support from parents
46% active participation in lessons
30% play
25% peer support

What helps pupils to engage in positive behaviour?
63% interesting lessons
60% understanding teachers
46% helpful peers
45% good behaviour management (e.g. classroom rules)
25% attractive classrooms

8.2.9 Family structure and poverty

Family structure, family dynamics and parenting emerged as key home predictors in contrast to weaker predictors such as SES, locality, home language, family size, local organisations, and neighbourhood safety and support. Family structure is one of the strongest predictors in the study both as a risk and promotive factor (Cefai, Cooper and Camilleri, 2008). Children in single parent families appear to be particularly vulnerable to SEBD. 14% of children and young people in Malta live with one parent (NSO 2010). Malta has also a relatively high rate of teenage pregnancies (5.8%) compared to the 3% EU average (Euro-Peristat, 2008). Research shows that a harmonious, intact two parent family is one of the strongest protective factors for young children (Buchanan and Ritchie, 2004; Fomby and Cherlin, 2007; Osborne and McLanahan, 2007). On the other hand, loss of parent through separation/divorce accompanied by discord and disharmony and economic difficulties,

is particularly risky for primary school children, particularly boys (Wallerstein, Corbin and Lewis, 1988; Morrison Gutman et al., 2010). However, if single parents are able to provide a positive and healthy home environment for the children, children's social and emotional development is likely to follow a normative trajectory (Hetherington and Stanley-Hagan 1999; Morrison Gutman, et al. 2010).

Children from single parent families in Malta are more likely to be living on the poverty line (NSO, 2011). Poor SES is strongly related to SEBD in this study, with children coming from poor families being twice as likely to experience an increase in SEBD. Poverty may be related to other risk factors as well, such as family and parenting stress, lack of quality time and poor supervision (Amato, 2005; Engle and Black, 2008; McLanahan, 2009). It is also linked to poor physical health, poor cognitive development, low academic achievement and mental health difficulties amongst children (Engle and Black, 2008; Morrison Gutman et al., 2010; Schoon et al., 2011). This is a particular cause for concern, as more than one in five children (22%) in Malta, are at the risk of poverty (Eurostat, 2010). It underlines the cumulative and interactive impact of risk factors on SEBD. As already indicated, being exposed to more than one risk factor increases considerably the risk of developing SEBD and mental health. Clearly children coming from single parents are key targets for multifaceted interventions related to education, employment (including minimum wage, pay equity, paid sick leave/dependent care leave, and flexible work schedules), child care, income supports, health care and housing amongst others (see Box 8.7).

Box 8.7: Supporting single parent families (adapted from Montgomery County Commission for Women, 2009)

An action plan to support the healthy development of single parent families includes targets related to education, employment, child care, income supports, health care and housing. Some of key policy recommendations may include:

- Provide incentives and supports for low-income girls to earn post-secondary and tertiary education or vocational training, including careers in science, technology, mathematics and engineering.
- Organize training programs specifically for low-income women to help them escape occupational ghettos and access better jobs with better pay and benefits.
- Include parent education and training as part of the social benefits.
- Train teachers to emphasize to their students that educational achievement is the best way to avoid poverty.
- Increase the minimum wage to a living wage and index the minimum wage to reflect annual changes in the cost of living;
- Encourage employers, both state and private, to allow flexible work schedules for all workers, regardless of income level.
- Modify child care subsidy programs so that an eligible family is required to spend no more than 10% of its income for child care.
- Reduce/remove income tax for many low- and moderate – income families.
- Expand the availability and enhance the quality of affordable preschool programs for families of low income.
- Provide tax credits or other incentives to encourage the business community to provide child care benefits.
- Provide sufficient funding for and improve enforcement of child support orders.
- Reform and update child support guidelines - including updating the underlying economic estimates of child rearing costs, income guidelines, and necessary self-sufficiency reserves.
- Expand access to critical preventive health care for low-income women
- Provide comprehensive, affordable health care for all.
- Expand support services for low-income housing.
- Increase the total amount of affordable housing, including rental housing.
- Explore the feasibility of developing alternative initiatives such as programs that might facilitate arrangements for single-mother families to share housing.

8.2.10 Family relationships and parenting

Healthy family relationships, family resources such as quality time, cohesion and good conflict management, and positive parenting emerged as the three groups of family related processes mostly linked to SEBD and prosocial behaviour. These three key processes provide a stable, healthy and protective environment which promotes the healthy development of young children, even in the face of stress and other risk factors that children may be facing (Darling, 1999; Morrison Gutman et al., 2010). The presence of positive and supportive parents is one of the most powerful protective factors for children aged 5-10 years over time (Osborne and McLanahan, 2007). Authoritative parenting, where parents provide expectations and structure within a caring and nurturing context, is a highly beneficial process in children's healthy development, particularly for children in distress, while family cohesion protects children from stress by promoting their sense of control and coping strategies (Darling, 1999; Morrison Gutman et al., 2010). On the other hand, poor family relationships, impoverished family resources such as disharmony, discord and low quality time, and poor parenting such as inadequate supervision and coercive parenting, put children's social and emotional development at risk (cf. Amato, 2005; Osborne and McLanahan, 2007; McLanahan, 2009). The data suggests that parenting stress appears to be a strong predictor of SEBD while parenting difficulty is a weaker predictor, suggesting that while parents may have no difficulty in being good parents as such, their stress in enacting their role may compromise their competence.

These findings underline the need to build support systems for families and parents, particularly those having young children, in bringing up healthy children. This would also lessen the burden on schools and services on providing prevention and intervention programmes later on in children's lives (Farrell and Humphrey, 2009; Sollars, 2010). Parental education and family learning, support to build resilience and competence in parents, provision of resources such as transportation, flexible childcare facilities, flexible parental

leave and working hours, access to essential services for families, availability of social services and healthcare, and economic and financial packages, would facilitate the role of families in bringing up healthy children and young people (see Box 8.8). Particular support to families in difficulties, such as large families with limited resources, families living in poverty, families with unemployed parents, single parent families, and families experiencing psychological or relational problems such as family breakup, parental psychopathology, violence and discord, are particular targets for intervention. Such support, however, would need to be provided without increasing the stigma attached to some communities and families. Parenting education and support need to become the norm for all parents, as in the case of antenatal courses (Paterson, 2011).

Box 8.8: Protective Factors for Promoting Healthy Families (Department of Health and Human Services USA, 2007)

Nurturing and Attachment: A child's early experience of being nurtured and developing a bond with a caring adult affects all aspects of behaviour and development. When parents and children have strong, warm feelings for one another, children develop trust that their parents will provide what they need to thrive, including love, acceptance, positive guidance, and protection.

Knowledge of Parenting and of Child and Youth Development: Discipline is both more effective and more nurturing when parents know how to set and enforce limits and encourage appropriate behaviours based on the child's age and level of development. Parents who understand how children grow and develop can provide an environment where children can live up to their potential. Child abuse and neglect are often associated with a lack of understanding of basic child development—or an inability to put that knowledge into action. Timely mentoring, coaching, advice, and practice may be more useful to parents than information alone.

Parental Resilience: Resilience is the ability to handle everyday stressors and recover from occasional crises. Parents who are emotionally resilient have a positive attitude, creatively problem solve, effectively address challenges, and are less likely to direct anger and frustration at their children. In addition, these parents are aware of their own challenges—for example, those arising from inappropriate parenting they received as children—and accept help and/or counseling when needed.

Social Connections: Evidence links social isolation and perceived lack of support to child maltreatment. Trusted and caring family and friends provide emotional support to parents by offering encouragement and assistance in facing the daily challenges of raising a family. Supportive adults in the family and the community can model alternative parenting styles and can serve as resources for parents when they need help.

Concrete Supports for Parents: Many factors beyond the parent-child relationship affect a family's ability to care for their children. Parents need basic resources such as food, clothing, housing, transportation, and access to essential services that address family-specific needs (such as childcare, health and mental health care) to ensure the health and well-being of their children. It is critical to provide concrete supports, information, and access to community resources that families need. These combined efforts help families cope with stress and prevent situations where maltreatment could occur.

8.2.11 Classroom engagement and sense of community

Whole classroom and whole school variables appear to have less influence on the development of SEBD and prosocial behaviour than individual factors. The two main classroom processes which appear to prevent SEBD and promote prosocial behaviour are pupils' participation in the classroom and a sense of classroom community.

Active pupil participation in meaningful activities relevant to pupils' lives and matched to their interests, developmental needs and learning styles, addresses pupils' needs for competence and esteem. They are particularly crucial for pupils considered at risk and for pupils with SEBD (Benard, 2004; Groom and Rose 2004; Cooper and Jacobs, 2011). Experiential and constructivist learning activities, use of multi-sensory resources and interactive activities, and a pedagogy drawing on pupils' own developmental stages, experiences, interests and strengths, are useful tools in facilitating students' active engagement. Learning becomes an enjoyable enterprise, spilling over to the whole classroom group. Teachers have long been aware that pupils who are busily and happily engaged in ongoing classroom activities have little time for misbehaviour.

A sense of classroom community is linked to positive academic and social outcomes among primary school pupils, including those considered at risk of school failure and psychosocial difficulties (Solomon et al., 2000; Battistich , Schaps, and Wilson 2004; Cefai, 2007). As Dweck (1999) argues, pupils' beliefs about themselves, their abilities and learning, are strongly influenced by the classroom processes and relationships. Pupils who feel trusted and valued internalise the values and goals that the teachers and the group hold for them, and are more likely to be motivated, to work hard in the classroom, and to engage in those behaviours that are expected of them. Pupils with a strong sense of belonging to their classroom community are more likely to internalise the academic and social values and behaviours inherent in that community, such as mutual understanding, respect and support, sharing, collaboration, solidarity and other prosocial behaviours, as well as positive attitudes towards learning (Deci and Ryan, 2000). In a study of a number of Year 2, 3 and 4 classroom communities in Maltese primary schools, Cefai (2008) identified a number of processes which helped to build a sense of community amongst the pupils. The community building blocks included caring and supportive relationships between the teacher and pupils, an ethic of support and solidarity amongst the pupils, authentic, active and meaningful pupil

engagement, collaborative learning and teamwork amongst all classroom members, full inclusion of all pupils in the learning and social processes, positive beliefs and high expectations for all pupils on the part of the teacher, and pupil autonomy and participation in the classroom decisions. Taken together, these processes created a caring community that became more than just the sum of its parts, promoting positive academic and social values, attitudes and behaviours amongst all members.

8.2.12 Bullying and misbehaviour at school

Pupils' behaviour at school, such as bullying, misbehaviour, and participation, appear to be the key determinants of SEBD and prosocial behaviour, in contrast to staff's own behaviour such as participation and collaboration in school activities and decisions, collegiality and administrative support; the latter emerged a relatively weak predictors. Bullying is one of the strongest risk and promotive factors in the whole study, indicating that pupils attending schools where bullying is high are particularly vulnerable to SEBD.

Whilst it is encouraging to note that the latest HBSC study, which is based on students' self-reports, reported that bullying in Maltese schools is lower than the EU average (WHO, 2008), other data based on staff's perceptions and reports of incidents, suggests a more problematic picture. A study amongst OECD countries, reported that almost half (48.8%) of lower secondary students in Malta intimidated or verbally abused other students, a figure significantly higher than the OECD average (OECD 2009). In 2010-2011, 218 reports of bullying in schools in Malta were received at the Safe School Programme at the Education Directorates (Malta Today, 2011). The HBSC study (WHO, 2008) also reported that 13% of female and 26% of male students aged 13 years, engage in frequent fighting. These percentages contrast considerably with 7% and 21% respective EU averages. Box 8.9 provides various suggestions on how schools may prevent and deal with bullying and violence.

High levels of bullying and pupil misbehaviour and lack of pupil participation and support at the whole school level, pose a high risk for individual pupils' positive behaviour and emotional wellbeing. This may not only operate directly with individual pupils being directly subjected to bullying for instance, but also through the promotion of a peer culture where bullying, misbehaviour, anti-social behaviour and disengagement become ingrained in the school's ethos and everyday behaviour. On the other hand, a school with low levels of mishebaviour and bullying and high levels of pupil engagement and support has a positive impact on pupils' prosocial behaviour.

Box 8.9: Dealing with bullying and violence at school (adapted from Datasav, 2011)

Research evidence suggests that interventions to prevent bullying and violence in schools:

- Are implemented fully, intensively and consistently, with clear specific and clear aims and written guidelines, and a sound theoretical base.
- Avoid using peer work which brings difficult, violent or bullying pupils together, but use peer norming, pairing those with difficult behaviour with those who are more positive have adverse effects.
- Use a range of staff as appropriate to the stage of the intervention e.g. specialist staff to initiate and teachers to sustain and embed the work in the academic curriculum.
- Have an explicit goal of preventing violence and bullying but focus on the whole child, not just their difficult behaviour, using positive rather than problem or fear based approaches, and developing attitudes, values, skills and beliefs.
- Are embedded within a whole school approach, where several components of the school are mobilised to provide an effective environment both to prevent violent and bullying behaviour and promote mental health and wellbeing.

- Develop a whole school climate which emphasizes respect, tolerance and good relationships, and which also makes it clear that violent or bullying behaviour is not acceptable and which responds to it immediately and with clear and strong consequences for perpetrators.
- Develop skills and provide practical work to strengthen social, emotional, cognitive and behavioural competences, with opportunities to practice in a range of contexts, and integrated into the curriculum. Where there is a particular problem include more specific skills to address difficult behaviour, such as impulse control, empathy, conflict resolution, mediation and assertion.
- Ensure parental involvement and offer parenting education to all parents, within which special help offered to the parents of children with difficult behaviour can be less stigmatizing.
- Give leaders with training and ongoing consultancy and support.
- Ensure community involvement, using adults as support, mentors and role models, including providing well controlled, peaceful and tolerant models of strength and authority.
- Operate over several years and start early, providing education in generic social and emotional skills with the youngest students and continue with older ones, providing more specific skills to address difficult behaviour.

The WHO framework for health promotion in schools recommends a whole school approach which includes the development of a supportive school ethos and environment as one of the key constituents (WHO, 2007). Current research is underlining the importance of a positive school climate with positive values, attitudes and behaviours as a key factor in the promotion of pupils' wellbeing, behaviour and mental health (Adi et al., 2007; Slee et al., 2009; Greenberg, 2010). Such a climate promotes positive and healthy relationships amongst school members, as well as a sense of belonging and attachment to the school and its values (Browne et al., 2004; Adi et al., 2007; National Institute for Health and Clinical Excellence, 2008).

Box 8.10: Promoting a positive school climate (adapted from the Ontario Ministry of Education, 2010)

Guiding principles:

- Everyone has a role to play in building a welcoming, positive and inclusive school climate. Success depends on active involvement of school leaders, staff members, students, parents/guardians and community members who are committed to a shared, well-developed vision of a safe, caring, supportive school community.
- Building a positive school climate requires a focus on developing healthy and respectful relationships throughout the school community – among students, among adults, and between adults and students.
- Building a positive school climate means embedding the principles of equity and inclusive education in all aspects of the learning environment to support the well-being and achievement of pupils.
- No single solution can guarantee the creation and maintenance of a positive school climate. Success requires an ongoing, collaborative and comprehensive effort on the part of everyone involved.

Characteristics:

- Students, parents, and staff members feel safe, comfortable, and accepted.
- Healthy and respectful relationships are promoted among all members of the school community.
- Students are encouraged to be leaders and positive role models– for example, by speaking up about issues such as bullying.
- Parents and community members are actively engaged.
- Positive behaviour is reinforced and students are given opportunities to develop relationships that are free of racism, discrimination, and harassing behaviour.
- There is a culture of high expectations in which the improvement of learning outcomes for all students is emphasized.
- All cultures are respected and valued.

Bear, Blank and Smith (2009) provide a number of characteristics which were found to be effective in building and maintaining a positive school climate, namely positive relationship-building among pupils, school staff and families; a sense of belonging, with both pupils and staff actively engaged in the life of the school and experiencing school as meaningful and productive; positive behaviour supports in contrast to the use of coercive measures; high expectations in both academic and social goals amongst teachers, pupils, and parents; development of social and emotional skills among all pupils; involvement of parents and community who are viewed as valuable resources and are strongly encouraged to take an active role in the school; fairness and clarity of rules; and school safety (see Box 8.10).

8.3 Conclusion

About ten percent of Maltese young children are experiencing significant difficulties in their social and emotional development and are at significant risk of experiencing mental health problems. This has implications not only for the short and medium term, but for the long term as well, as poor adjustment in childhood has been consistently linked with negative psychosocial outcomes in adulthood. The foundations for mental health difficulties, delinquency, criminality, social exclusion, relationship problems and substance abuse in adulthood are largely laid in childhood. Children today are facing increasing pressures and stresses in their lives which render the concept of childhood as a time of innocence and bliss, an irrelevant one. On the other hand, we have also evidence that children and young people who possess good social, emotional and cognitive skills, are more likely to lead healthy and satisfying lives in adulthood. The resilience perspective has also shown that even those young children who are faced with multiple risks may be helped to overcome the odds and grow up as healthy and successful individuals. We are not suggesting that we need to shelter our children and eliminate the vestige of all childhood problems, which is not only impractical but unwarranted. The goal is that childhood is

lived and experienced in contexts which provide the child with the opportunities and competencies required to accomplish adjustment, success and fulfillment in life.

This study has identified the key risk and promotive factors in the development of SEBD and prosocial behaviour in young primary school children in Malta. It has pinpointed particular windows of vulnerability which need to be closed as early in children's lives as possible. It has also drawn our attention to particular windows of opportunity which might be developed to support the healthy development of young children. It has made a number of recommendations on how to reduce and address the risk factors and facilitate the promotive factors identified in the study, with a particular focus on building healthy, supportive and responsive classroom and family communities. The findings have also shown that pupils' behaviour and development are complex, multi-faceted phenomena, and that simplistic, one sided approaches are set to fail to help children in the long term. An adequate model of promotion, prevention and intervention will need to address this complexity, taking into consideration the various individual, home, community, and school predictors identified in the study. Prevention and intervention need to take place within a systemic, multidisciplinary approach addressing systems such as home, school and community, and involving various agencies and services at universal, selective and indicated intervention levels. The major resources in the country need to be focused on health promotion and prevention as early in the child's life as possible, seeking to prevent identified risks and facilitate promotive and protective factors at the various systems in which the child operates.

Finally, we would like to end with a note of caution. The findings in this report are based on a relatively small sample of primary school pupils from the ten colleges in Malta and Gozo. It is thus imperative that the generalisation of the findings are treated with caution, namely as indicators of trends and pathways, rather than conclusive and definite trajectories.

8.3.1 Final comment

In the face of difficult and challenging behaviour in children, adults may be at risk of becoming disillusioned and dispirited, believing that the problems cannot be overcome and that failure is inevitable. Such attitudes are likely to lead to a negative self fulfilling cycle. As Cooper (2006, p.84) very aptly put it, we must not give up on children and young people: "There is no point working in educational settings unless we have a commitment to the idea that we can make a positive difference in the educational lives of our children…maintaining a positive and optimistic attitude is very important". We must never lose hope when working with children and young people in difficulty. The literature has repeatedly shown us that even in the midst of the most adverse circumstances and the most challenging behaviours, children are able to overcome the odds and go on to achieve successful and healthy lives.

We must accept finite disappointment, but never lose infinite hope

Martin Luther King

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